ESTIMATES OF SUBSISTENCE SALMON HARVESTS WITHIN THE YUKON RIVER DRAINAGE IN ALASKA 1993

by

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Regional Information Report[1] No. 3A98-06

Alaska Department of Fish and Game
Commercial Fisheries Management and Development Division
Arctic-Yukon-Kuskokwim Region
333 Raspberry Road
Anchorage, Alaska 99518

March, 1998

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ACKNOWLEDGMENTS

A survey project could not be accomplished without the dedication and commitment of the survey crew. Survey crew leader Rich Chapell provided consistent leadership throughout the project. Rich Chapell and crew members Shelby Edmond and Jon Becker are all thanked for working hard to collect the data presented in this report. Carol Kerkvliet is acknowledged for her contribution in summarizing the postcard information. Steve Hayes and Bonnie Borba are thanked for editing and entering the survey and permit information into the computer database. Keith Schultz, Dan Bergstrom, and Gene Sandone are thanked for their constructive comments and reviews of survey forms, permits, and this report. We would like to thank Jeff Bromaghin and Larry Buklis for their statistical and organizational guidance. The authors gratefully acknowledge the proofreading and software expertise that Kristi Dollmont, Fairbanks Field Office Assistant, provided in completion of this report.

SPONSORSHIP

This investigation was partially funded by U.S./Canada salmon research Cooperative Agreement Award No. NA17FP0250-01.

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ABSTRACT

Estimates of subsistence salmon harvests in the Alaska portion of the Yukon River drainage have been documented by the department since 1961. Survey methods and harvest reporting have varied. Successful management of the Yukon River fishery resources depends upon accurate estimates of subsistence harvests. The number of salmon harvested in Yukon River subsistence fisheries in 1993 were estimated from a survey program, from subsistence fishing permit information, and from department test fish given to the public. An estimated total of 67,130 chinook *Oncorhynchus tshawytscha*, 126,852 summer chum *O. keta*, 77,045 fall chum, and 15,812 coho *O. kisutch* salmon were estimated to have been harvested by 1,376 fishing households in 1993.

The majority of households in the Yukon River drainage reside in villages in which there are no regulatory requirements concerning reporting of their subsistence salmon harvest. The department has implemented a survey program to estimate the salmon harvest from areas not requiring a permit. The 1993 database contained 2,581 households in 34 villages and included the villages of Hooper Bay and Scammon Bay. The survey program utilized subsistence catch calendars, postseason household interviews, and postseason household telephone interviews to improve the sampling frame and to estimate the harvest. Stratified random sampling techniques were used to identify 1,177 households which were to be interviewed during the 1993 survey. The stratification of the households was based on prior year harvest information. A total of 979 households, equaling 83 percent of the identified households were contacted by personal interview, telephone interview, calendar receipt, or letter survey. Based on the household interviews (95 percent confidence intervals are in parenthesis), an estimated 1,151 (±84) fishing households harvested a total of 56,529 (±8,822) chinook salmon, 111,966 (±12,922) summer chum salmon, 57,586 (±10,609) fall chum salmon, and 9,981 (±2,162) coho salmon.

Fishing households which fished in areas requiring a permit were required to obtain a permit, document their catch, and return the permit upon expiration. A total of 310 subsistence permits were issued, which included six households which were issued permits to fish in two different permit areas and 30 Minto households who were issued Tolovana River subsistence pike permits and salmon permits. The reported subsistence permit catches by 288 permittees who had returned their permits as of February 14, 1994, was 7,349 chinook salmon, 7,370 summer chum salmon, 15,122 fall chum salmon, and 4,415 coho salmon. Households which fished within the Fairbanks Non-Subsistence Zone were required to obtain a personal use fishing permit. A total of 137 personal use permits were issued, and the salmon harvest for the 135 permittees who had returned their permits as of 14 February, 1994 was 426 chinook salmon, 674 summer chum salmon, 163 fall chum salmon, and 0 coho salmon. In order to reduce spawning habitat disturbances the department did not issue any Delta River fall chum carcass permits.

Additionally, fish retained from commercial catches for subsistence use (excluding commercial related salmon) were included in the subsistence salmon harvest estimate. A total of 2,789 chinook and 604 summer chum salmon were retained from commercial catches as documented by a combination of fish ticket and survey information. Commercial related salmon not included in

the subsistence salmon harvest estimate were female salmon harvested to produce the roe sold in Districts 4, 5, 6 and male summer chum salmon in District 4.

Department test fisheries gave away a total of 2,055 chinook salmon, 6,242 summer chum salmon, 4,409 fall chum salmon, and 1,432 coho salmon to households in the villages of Emmonak, Kotlik, Pilot Station, and Manley.

KEY WORDS: Salmon, chinook salmon, chum salmon, coho salmon, subsistence fishing, subsistence harvests, subsistence survey, subsistence permit, Yukon River

INTRODUCTION

Effective management of Yukon River salmon populations requires knowledge of the number of salmon harvested in subsistence fisheries. Although all five salmon species are harvested in both commercial and subsistence fisheries, chinook, chum, and coho salmon compose the bulk of all commercial and subsistence harvests. In portions of the drainage, subsistence harvests of some species, particularly chum and coho salmon, are substantial and frequently exceed commercial harvests.

Early exploration reports documented the importance of subsistence salmon harvests to people living in the Yukon River drainage (Zagoskin [1847] 1967; Allen 1887). Large historical salmon harvests were used to support dogs used for transportation, packing, and as draft animals (Richardson [1900] 1964; Gilbert and O'Malley 1921). Around 1930 the airplane began replacing the sled dog as mail and supply order carrier, which contributed to a gradual reduction in subsistence harvests. During the early to mid-1960s an increased use of snow machines accelerated the decline of sled dog use faster than did the airplane. Subsistence salmon catches declined through the 1970s as increased welfare payments and employment opportunities, including commercial fishing activities, became available to rural residents (Alaska Department of Fish and Game 1985). It is likely that the sale of subsistence-caught salmon roe (legal from 1974 through 1977) increased subsistence chum salmon catches in the Upper Yukon Area above normal use levels during the mid 1970s. Beginning in the early 1980s, due, in part, to a renewed interest in sled dog racing, the number of dogs per family increased in some portions of the drainage with a coincidental increase in the subsistence salmon harvest. In addition, the human population along the river is increasing, which may also be directly related to increased subsistence salmon harvests. Excluding the greater Fairbanks area (population 74,000 in 1990), some 40 communities, with a total population of approximately 11,000 people of primarily Yupik Eskimo and Athapaskan Indian descent, are located within the drainage.

The primary fishing gear which households use to harvest subsistence salmon in the Yukon Area includes drift gillnets, set gillnets, and fish wheels (Table 6). Subsistence fishermen deploy gillnets in the main rivers and coastal marine waters. Fish wheels are used by subsistence fishermen in the upper Yukon and Tanana Rivers. Beach seines are occasionally used near spawning grounds to catch schooling or spawning salmon. Not all gear types are legal in all portions of the drainage.

Subsistence salmon fishing occurs from late May through October, although this varies throughout the drainage. Fishing activities are based either from a fish camp or home village. However, the degree to which one or the other is more prevalent varies from village to village. Some people from communities not located along the mainstem Yukon River; such as Shageluk and Birch Creek, may operate fish camps along the mainstem. Subsistence salmon fishing is often undertaken by extended family groups representing two or more households in a community. These groups, as well as members of individual households, cooperate to harvest, cut, preserve, and store salmon for subsistence use.

There is usually little wastage of the fish taken for subsistence purposes. A major portion is sun

dried or smoked for later consumption, while the head and viscera may be fed to dogs. Wet weather may cause fish to spoil during the drying process. Chinook salmon are used mainly for human consumption. While chum and coho salmon also are used for human consumption, relatively large numbers are taken to feed sled dogs. It should be noted that the practice of keeping sled dogs is much more common in the Upper Yukon Area than in the Lower Yukon Area, and it is considered a major factor affecting subsistence use.

Many people who fish for subsistence purposes also are commercial fishermen. In major commercial fishing areas it is necessary to place the subsistence fishery on a schedule in order to enforce commercial fishing regulations. During the fishing season, however, substantially more fishing time is allowed for subsistence fishing than for commercial purposes. Since the early 1960s, subsistence fishing has been managed and regulated to coincide with commercial fishing periods when the commercial fishing season is open. In all districts, additional subsistence-only fishing time is allowed during the commercial fishing season. Prior to and following the commercial fishing season, subsistence fishing is allowed seven days per week in Districts 1-5, and during two 42-hour periods per week in District 6.

Information concerning subsistence fishery harvests within the Alaskan portion of the drainage has been collected by the department since 1961 and is recorded in the Yukon Area Annual Management Reports. Since 1961 Division of Commercial Fisheries staff have conducted subsistence surveys, except for 1988, when Subsistence Division staff conducted the 1988 survey with the objective of improving survey data collection and analysis (Walker et al. 1989). Subsistence salmon catch data has been collected through the use of personal interviews, catch calendars, and mailed questionnaires. Survey methodologies prior to 1988 were varied, although the basic premise was consistent--that surveyors census all known "fishing families" (groups of households which fished together) in a village. The basic methodology developed by the Subsistence Division in 1988 was to identify all households in each community and to stratify the updated community household lists by "usually fish" and "usually not fish" households (Walker et al. 1989). Substantially more fishing households were identified than on the fishing family lists used prior to 1988. Since the historical survey lists evaluated households in a broader sense (family units working together to harvest and process salmon), there is no direct correlation between fishing family and fishing household. Historical subsistence catch data has been expanded for non-contacted fishing families or households on a community basis, and expanded community harvests summed for district and total drainage estimates on an annual basis.

The stratification system developed by the Subsistence Division was further refined in 1990 and 1991 in order to improve the accuracy and precision of the drainage-wide subsistence harvest estimate (Holder and Hamner 1991, Bromaghin and Hamner 1993). In 1990 households were classified into one of five catch strata based upon their level of subsistence harvest in 1988 and 1989. In subsequent years, household historical harvest levels were reviewed to ensure households were categorized correctly. A stratified random sample (Cochran 1977) was drawn from the strata formed by combinations of village and harvest level. Assuming that households tend to harvest the same number of fish in the current year as they have historically, this stratification system allows the households with the heaviest harvest of the resource to be sampled more intensively.

Since the development of the salmon roe commercial fisheries in 1978 due to prevailing market conditions, identifying and categorizing subsistence and commercial catches in the Upper Yukon Area has been difficult because fish harvested to produce commercial roe sales are also utilized for subsistence purposes. It is believed that many of the carcasses produced as a byproduct of the commercial fishery replace salmon that would have been harvested under subsistence fishing regulations. Because of the difficulty in assigning a single use to the harvest, the decision was made in 1990 to separately account for harvests that produce roe sales from subsistence harvests in the total utilization tables in the Annual Management Reports. The outcome of this exercise was that reported subsistence harvest was reduced in some districts and years based upon assumptions of when and where the fish were harvested. The commercial related salmon harvest can be viewed as utilization for both commercial and subsistence purposes. To avoid double counting, a separate commercial related harvest estimate can be summed with the subsistence harvest for total subsistence utilization, or it can be summed with the commercial harvest for total commercial utilization when evaluating commercial guideline harvest ranges.

The males harvested in salmon roe fisheries, other than the summer chum salmon fishery in District 4, are believed to be either sold or retained for subsistence use, and therefore not included in the commercial related harvest. However, in District 4, the number of summer chum salmon carcasses available from the commercial fishery is usually much greater than the historic subsistence harvest. To evaluate the number of fish potentially available for subsistences uses and document the total fish probably harvested during the District 4 commercial fishery, the estimated number of male and female summer chum salmon taken during commercial fishing has been estimated from the pounds of roe sold generated by the pounds of roe per female and the sex ratio. The difference between the number of summer chum salmon potentially available for subsistence use and those estimated actually used for subsistence is due in part to nonretention of males, transport of fish out of the surveyed villages, and loss of fish to spoilage or animals. It is probable that the unmarketable carcasses have simply replaced a large portion of the subsistence harvest in this area.

During the years 1981, 1982, 1983, and 1985, the District 4 subsistence surveys did not estimate the amount of commercial related summer chum salmon used for subsistence purposes. In 1984 when the Subsistence Division conducted subsistence surveys in the villages of Kaltag and Nulato they excluded the commercial summer chum salmon used for subsistence purposes in those two villages, and, for this reason, summer chum salmon catch estimates for these villages were much lower than previous years. For 1986 through 1989, District 4 subsistence surveys were conducted to estimate both the number of summer chum salmon taken under subsistence fishing regulations and those fish used as a byproduct of the commercial fishery (commercial related). The average percentage of District 4 (excluding Koyukuk River villages) summer chum salmon harvested under subsistence fishing regulations (of the total summer chum salmon used for subsistence purposes) for 1986 to 1989 was 26% (Appendix B.12). Beginning in 1988, efforts were made to exclude commercial related harvests from the District 4 subsistence harvest estimate.

During the 1990 and 1991 surveys, households were not asked to identify all commercial related harvests used for subsistence purposes but households were asked the number of salmon fed to dogs. Although the majority of salmon available for subsistence use as a commercial related

harvest are used for dog food, estimates of the number of summer chum salmon fed to dogs includes both subsistence caught fish and those obtained as a byproduct of the commercial fishery, and since an estimate of the salmon used for human consumption out of the commercial related harvest was not generated, the total number of salmon used for subsistence during 1990 and 1991 cannot be calculated.

The issue of the number of salmon harvested to feed to dogs continues to resurface on an intermittent basis, usually when a run size projection identifies that there will not be enough salmon available to meet escapement and subsistence needs or because individuals disagree that feeding salmon to dogs is a legitimate subsistence use. Appendix B.13 identifies information on numbers of dogs and salmon fed to dogs, collected from the surveys and permits from 1990 to 1993.

Since 1990 commercial fishermen in Subdistrict 4-A have been required by regulation to report the number of fish killed to produce the roe sold. However, the reported number of fish harvested during the commercial fishery was less than the department estimate. To quantify the number of carcasses Subdistrict 4-A commercial fishermen actually used themselves, gave away, or lost to spoilage or animals, a separate survey questionaire was used for subdistrict 4-A fishermen during the 1992 and 1993 surveys.

In areas where subsistence salmon fishing permits are required, the department depends on the returned permits and reported harvest for subsistence information. Subsistence fishing permits have been required for three sections of the Upper Yukon Area: 1) since 1974 for the Yukon River near the Yukon River Bridge between Hess Creek and the Dall River; 2) since 1979 for the upper portion of District 5 between the upstream mouth of Twenty-Two Mile Slough and the U.S./Canada border; and 3) since 1964 for the Tanana River upstream of Wood River. Beginning in 1988 subsistence permits have been required for the entire Tanana River drainage.

METHODS

Information compiled from the department survey project, permit program, department test fishery, and commercially retained salmon on the fish tickets are the primary sources of information used to estimate the number of salmon harvested in the subsistence fisheries in the Alaskan portion of the Yukon River drainage. Typically the harvest information from the permits and surveys are summed, although Stevens Village is an exception. Since many Stevens Village residents fish in non-permit areas, Stevens Village residents are surveyed even though some residents fish in an area requiring a permit. The permit information is included in the survey harvest information, therefore, Stevens Village permit harvest information must be subtracted from the permit information total to avoid double counting.

Subsistence Survey

The 1993 survey program had several components. All components were intended to help generate an accurate and precise estimate of the number of salmon harvested by subsistence fishing households in surveyed villages. The primary components of the survey program were subsistence catch calendars, postseason personal household interviews, and postseason telephone or postal surveys of those households not personally contacted during the village visits.

The department mailed a total of 2,700 calendars during May 1993 to subsistence Yukon River households. Separate calendars were mailed to 1,243 lower and 1,457 upper Yukon fishing households due to the different months of harvest and the different local fish names (Appendix C.1 and C.2). The calendars were to be used by fishermen during the 1993 fishing season to record their daily salmon catch by species. The total daily catch of salmon was to be recorded regardless if they were given away or used for dog food. When the calendars were mailed to fishermen, a letter was enclosed which thanked fishermen for their participation in the 1992 survey and contained a table which summarized the 1992 subsistence salmon harvest by village (Appendix C.3). Harvest information from the returned calendars was used to complete the harvest information for surveyed households. Catch information from calendars returned by households not in the 1993 survey were recorded to ensure households were placed in the correct strata for the 1994 survey. To improve calendar returns, catch calendar posters were sent to each village post office to be posted to remind fishermen to complete their catch calendars before we came to pick them up in the fall (Appendix C.4). Appendix C.5 is an example of the announcements sent to radio stations that broadcast in the area prior to the surveyors arrival in the villages.

From the survey conducted in 1992 the household list was updated for the 1993 survey season. Although some households are deleted each year if they move out of the surveyed communities, 272 new households were identified, which represented an estimated 677 people, which was largely due to identifying heads of households from the 1991 permanent fund application list.

Based on previous tagging information (Kerkvliet 1986) which indicated that residents of the coastal villages of Hooper Bay and Scammon Bay were catching a high percentage of salmon bound for the Yukon River and Norton Sound, the department was able to include these villages in the 1992 subsistence survey sampling schedule and maintain the survey for these villages in 1993.

A list of households located in surveyed communities within the Yukon River drainage formed the sampling frame for the stratified random sampling program. The 1993 list of households was based on information surveyors collected during the previous years and the 1992 survey. Each household on the list was assigned a category of subsistence salmon harvest: unknown-, zero-, light-, medium-, and heavy-harvester. Households for which no previous harvest information was available were placed into the unknown category. Households which had historical harvest information were placed in the category of harvest based upon their average total annual harvest of salmon from 1988 through 1992. Households that harvested no salmon in those years were placed into the zero-harvest or do-not-harvest salmon category. Definitions of light-, medium, and heavy-harvesters differed between the Lower and Upper Yukon Areas, reflecting differing patterns of harvest preferences and relative species abundance. In the Lower Yukon Area an average harvest of 1 to 200 salmon was considered to be a light-harvester, a harvest of 201 to 500 salmon was considered to be a medium-harvester, and a harvest greater than 500 salmon was considered to be a heavy-harvester. In the Upper Yukon Area an average harvest of 1 to 100 salmon was considered to be a light-harvester, a harvest of 101 to 700 salmon was considered to be a medium-harvester, and a harvest greater than 700 salmon was considered to be a heavy-harvester.

A stratified random sample (Cochran 1977) of households was drawn from the stratified population; strata being defined by the combinations of community of residence and catch strata. In general, stratum sample sizes were established based upon the level of harvest. Medium- and heavy-harvest category households were censused, 30% of the light-harvest category households were sampled, 10% of the zero-harvest category households were sampled, and 20% of the unknown-harvest households were sampled. However, because of requests by management biologists, sample sizes were increased for some categories within some villages. In Emmonak, Pilot Station, and Tanana, 30% of the zero-harvest stratum and 50% of the light-harvest stratum were sampled. In Holy Cross, 50% of the light-harvest stratum was sampled. In addition, all households in communities with 35 or fewer households were censused. Further, if the stratum sample size was less than five households, the sample size was increased to the minimum of five, or the stratum size, to ensure an adequate sample size.

Surveyors were provided with project orientation information and required to attend a half-day training seminar during which the 1993 survey form was thoroughly discussed. Appendix C.6 is a copy of the 1993 interview form surveyors used for each interview. Each interview determined whether or not members of the household participated in a subsistence fishery in 1993, the number of each salmon species harvested, the number of each salmon species processed for their own households use, the number of fish that were a byproduct of a commercial fishery, the type of fishing gear used, and where they caught their subsistence salmon--which was categorized by fishing district, subdistrict, or tributary river. All households were asked if they received any

fish from another household, including from a commercial fishermen, from another subsistence fisherman, or from ADF&G which included airlifted fish flown in for relief from the poor fall chum salmon run; the number of people in the household, the number of dogs owned, the number of each salmon species fed to dogs, the number of subsistence salmon the household usually used during a year, and if the household had met their subsistence salmon needs in 1993. Those households who said that they had not met their salmon needs were asked to explain why they had not gotten enough salmon. To expand our knowledge of coho salmon spawning information, the 1993 survey included additional questions asking the person being interviewed if they had ever seen coho salmon spawning anywhere. If the interviewed person had seen spawning coho salmon the surveyor was to ask for the location, number and condition of the fish, and time of year of the sighting.

Households listed in the unknown-harvest category, and not identified to be surveyed were printed on a separate list for surveyors to pursue correct catch categorizing of those households. Surveyors were to check with key village contacts or possibly the listed household to enable placing the unkown-harvest households into the proper catch category and thereby decreasing the variance of the harvest estimates.

Additionally, due to the differences in summer chum salmon mortality estimates from different sources the department felt that a separate supplemental survey of Subdistrict 4-A commercial fishermen was warranted during the 1993 survey, similar to the supplemental survey conducted in 1992. The discrepancies were between the number of fish the department estimated being killed in the fishery, the number of fish fishermen reported killing, and the estimates of fish being used for subsistence. The survey form which was used to interview Subdistrict 4-A commercial fishermen is shown in Appendix C.7.

Telephone interviews were attempted for households who were to be surveyed but were not contacted during the village visits. A survey questionnaire with a postage paid return envelope was mailed to all households which were not contacted during the personal interviews or by telephone.

The collection of personal and telephone interview responses was assumed to constitute a stratified random sample. Estimation was performed using classical, stratified random sampling methods (Cochran 1977). During data analysis, if a strata contained only one household contact, the district variance was used to estimate the stratum variance. In addition, the district mean was used to estimate a strata mean if no households were contacted in the strata.

Based on our recommendation in 1992 to investigate some type of incentive program for increasing fishermen's participation in documenting their catch and returning completed subsistence salmon harvest calendars we proposed some type of monetary calendar reward. This was not adopted for a number of reasons. Instead, we initiated giving all survey or telephone participants a complimentary ballpoint pen in appreciation for participating in documenting the subsistence salmon harvest. The pens were yellow, monogrammed with blue writing "Alaska Department of Fish and Game - Yukon River - Subsistence Salmon Surveys".

Salmon harvested in test fisheries conducted by staff of the Division of Commercial Fisheries

were frequently given to the public and were assumed to replace salmon obtained through more traditional fishing activities. Salmon given away as part of a department test fishery were therefore included with the reported subsistence harvest for the appropriate location.

Subsistence Permits

Subsistence or personal use fishing household permits were required of resident individuals which desired to fish in permit required areas. The permit program documented the number of salmon reported harvested by residents of Alaskan communities from permit required areas. The permit harvest was reported as the total of the harvests reported on permits returned through February 14, 1994. Subsistence permit communities are located primarily within District 5 and lower District 6 (Subdistricts 6-A and 6-B) of the Upper Yukon Area. Personal use permits were required in Subdistrict 6-C and a portion of the Upper Tanana River. In 1993 a separate permit was issued for the Tolovana River drainage to subsistence fish for pike.

Permit applications were mailed, along with the letter in Appendix C.9, which explained how to apply by mail and gave the schedule of preseason permit issuing trips, to all 1992 permittees who reported their 1992 salmon harvests and lived in the villages of Nenana, Manley, Minto, Central, Circle, and Eagle. These trips were also announced by posters (Appendix C.8) sent to the listed village post offices to be posted. Permits were also available throughout the season from the Fairbanks office. Appendix C.10 is a copy of the 1993 household application and permit form for subsistence fishing in areas requiring a permit. Appendix C.11 is a copy of the 1993 household application and permit for Tolovana River drainage subsistence pike fishing. Appendix C.12 is a copy of the 1993 household application and permit for subsistence whitefish and sucker fishing. Appendix C.13 is a copy of the 1993 household application and permit for salmon personal use fishing. Appendix C.14 is a copy of the 1993 household application and permit for personal use whitefish and sucker fishing. Inseason fishing period news releases were used to inform fishermen of openings and closures.

Harvest was tabulated postseason for all permit holders who returned their permit and/or catch information. Permit holders were required to keep a record of their fish harvest and provide that information to the department when they were done fishing for the season or within 10 days of the expiration of the permit. Nearly all the permits had an expiration date of October 15, 1993. Fishermen who had not reported their harvest as of November 23, 1993, were sent a first reminder letter (Appendix C.15). On December 16, 1993, a second reminder letter was sent to all permittees who had not yet reported their 1993 salmon harvest (Appendix C.17). Fishermen who had complied at least once during the fishing season with the weekly reporting requirement (which applied to the upper portion of Subdistrict 6-B and all of Subdistrict 6-C) were sent first and second reminder letters which thanked them for reporting inseason and asked them to confirm their season harvest (Appendix C.16 and C.18). The Tolovana River drainage subsistence pike permits expired December 31, 1993 and the reporting reminder letter in Appendix C.19 was sent out on January 31, 1994.

Subsistence Salmon Obtained from the Commercial Fishery

Commercial fishermen were required to document the number of fish retained for subsistence use from their commercial catch on fish tickets, but compliance was poor. Since fish ticket reporting was poor, the estimate of salmon retained from commercial catches was the higher of either survey information or fish ticket records and is considered a minimal estimate. The salmon carcasses which became available for subsistence use as a result of the commercial sale of roe are considered part of the commercial harvest in the commercial related harvest category of the total utilization tables in Appendix A of the Yukon Area Annual Management Report (Alaska Department of Fish and Game, 1995).

RESULTS

The 1993 subsistence and personal use salmon harvests from all sources for the Alaskan portion of the Yukon River drainage by 1,376 fishing households was estimated to total 67,130 chinook, 126,852 summer chum, 77,045 fall chum, and 15,812 coho salmon. For reporting consistency with Yukon Area Annual Management Reports, Table 1 summarizes the 1993 Alaskan Yukon River drainage subsistence salmon harvest and related information by community of residence. Department test fish projects gave away a total of 2,055 chinook, 6,242 summer chum, 4,409 fall chum, and 1,432 coho salmon for subsistence use in the communities of Emmonak, Kotlik, Pilot Station, and Manley in 1993 (Table 2). Test fish projects in Nenana and Tanana did not give any fish away.

Subsistence Survey

The 1993 survey database contained 2,581 households in 34 village communities. The stratified random sampling design identified 1,177 of these households which were to be surveyed in these survey villages. Staff from the Division of Commercial Fisheries traveled to each of these villages between September 7 and December 14, 1993, and attempted to interview a member of each household included in the sample. Table 3 contains a list of the communities visited and the dates when the personal interviews were conducted. A total of 979 households, or 83% of the households which were to be sampled, were contacted. A total of 171 calendars were either picked up by surveyors during the personal interviews or mailed back to the department by subsistence fishermen. Table 4 contains a summary of the total number of households, the sample size, the contact rate for each stratum, and the percentage of sample households that were contacted. The contact number does not reflect households which were contacted and declined to participate in the survey or did not respond to our telephone or mail inquiry. The majority of mail questionnaires were returned with incomplete answers to the survey questions and were not suitable for inclusion in the sample frame.

Table 5 contains a summary of the estimated number of households from which at least one member harvested subsistence salmon, organized by community of residence and catch stratum. A total of 1,151 households, or 45% of the 2,581 total households, were estimated to have participated in harvesting subsistence salmon. Table 6 contains a summary of the fishing gear used by households which indicated they had participated in subsistence salmon fishing in 1993. A total of 9,828 people were estimated to populate the 34 surveyed villages (Table 7). Over two-thirds of these households were in strata associated with light-, medium-, or heavy-catch categories.

Salmon harvested by 1,151 fishing households of surveyed villages was estimated to total 56,529 chinook, 111,966 summer chum, 57,586 fall chum, and 9,981 coho salmon. The estimated total harvests of chinook, summer chum, fall chum, and coho salmon are organized by community of

residence and catch group in Table 8 and Appendices A.1 through A.4. Tables 9 through 12 identify the salmon harvest by the reported fishing district, subdistrict, or tributary location of where the fish were caught. Ten miscellaneous fish species harvested by the surveyed villages are listed in Table 13. The three most utilized miscellaneous species harvested were estimated to total 11,787 pike, 70,479 whitefish, and 12,039 sheefish.

The estimated salmon use for fishing and non-fishing households totaled 47,009 chinook, 136,292 summer chum, 60,481 fall chum, and 9,140 coho salmon which included commercial related salmon used for subsistence purposes. The estimated use totals of chinook, summer chum, fall chum, and coho salmon are organized by community of residence and catch strata in Table 14 and Appendicies A.5 through A.8.

An estimated total of 1,691 chinook and 32,727 summer chum salmon were retained from commercial catches and used for subsistence purposes by Yukon River drainage households (Table 15). Since no fall season commercial fishery occurred in the main Yukon River in 1993, no fall chum salmon or coho salmon could have been retained from fall commercial fishing activities.

A total of 5,893 dogs were estimated to be owned by an estimated 1,563 households located in surveyed communities (Table 16). These households estimated that they used 54,402 summer chum salmon, 43,857 fall chum salmon, and 6,580 coho salmon as dog food (Table 16). Due to the rare use of chinook salmon for dog food, an estimate of the number of chinook salmon used for dog food was not attempted. The above estimates include summer chum salmon harvested in the District 4 commercial fishery which are primarily used for dog food since the flesh is available to fishermen after selling the roe to processors.

Of the households interviewed, a total of 514 households said they had not met their subsistence salmon needs for 1993. Based on the reasons people gave, it is estimated that 233 households tried to fish for salmon and did not get enough salmon to meet their needs, while the remaining 281 households did not attempt to fish for salmon (Table 17 and Appendix A.12).

Surveyors interviewed 48 of 53 Subdistrict 4-A commercial fishermen. Table 18 summarizes the survey information. Thirty one percent of the interviewed fishermen said they threw back live male summer chum salmon. The most common method of returning the fish to the water was to drop the males into the water via a chute from the fish wheel to the water. The majority of fishermen who returned male fish did so for more than half of the available fishing time. The 48 Subdistrict 4-A fishermen reported killing 22,441 summer chum salmon, of which they reported retaining 51% for their own household use, 32% were reportedly given away to other households, 8% were sold/bartered to other households, and 9% were reportedly lost to spoilage (Table 18 and Appendix A.13).

Of the 979 households which were asked about spawning coho salmon, 93 households said, yes, they had observed coho salmon spawning, and 886 said, no, they had not observed coho salmon spawning. Table 19 summarizes tributary streams where migrating, spawning, or dead coho salmon had been observed.

Surveyors indicated that the complementary pens given to surveyed households after the interviews were very well received, they ended the survey interview on a positive note, and provided the opportunity to reinforce the need for accurate harvest information documented on the calendars.

Department test fish programs near Emmonak, Middle Mouth, Pilot Station, and Manley gave away a total of 2,055 chinook, 6,242 summer chum, 4,409 fall chum, and 1,432 coho salmon to households in Emmonak, Kotlik, Pilot Station, and Manley for subsistence use (Table 2). The survey program documented a total of 984 chinook, 4,274 summer chum salmon, 803 fall chum salmon, and 152 coho salmon given away by department test fishing programs to village households in Emmonak, Kotlik, and Pilot Station (Appendix A.11).

In an attempt to provide salmon to households which did not get enough salmon for the winter due to the fall season subsistence salmon fishing closure, in late fall the department participated in airlifting chum and pink salmon from two state hatcheries to four Yukon River villages. Based on the pounds of fish delivered, an estimated 1,789 chum and 326 pink salmon were delivered to Ruby; 4,164 chum and 236 pink salmon were delivered to Tanana; 1,180 chum and 502 pink salmon were delivered to Beaver; and 945 chum and 401 pink salmon were delivered to Chalkyitsik (Table 20). Appendix A.11 identifies the survey estimated receipt of Fish and Game salmon for these same villages; Ruby 1,552 salmon, Tanana 2,362 salmon, Beaver 1,613 salmon, and Chalkyitsik 1,760 salmon. Even though these fish were primarily identified for dog food, many households who received these salmon mentioned that the airlifted fish were of inferior quality compared to the Yukon River salmon they would normally have harvested.

Subsistence Permits

A total of 447 subsistence and personal use fishing household permits were issued during the 1993 fishing season. A total of 411 households participated since 6 households received permits to fish in two different permit areas and 30 Minto households were issued both a salmon permit and a Tolovana River drainage subsistence pike fishing permit. Households which fished in an area requiring a permit were required to obtain a permit, document their catch, and return the permit upon expiration. Permit issuing began in mid-May when a department representative traveled to six interior villages and issued 114 permits to village residents. The remainder of the permits were issued by mail or to individuals who applied for a permit at the Fairbanks office. The first permit was issued April 27, 1993, and the last permit was issued September 14, 1993.

Nearly all the permits had an expiration date of October 15, 1993, and permit holders were to return their permits within 10 days of permit expiration. Approximately 46% of the permit holders had returned their permits prior to November 23, 1993. On November 23 the first reminder letter was sent to 188 households which had not returned any postseason harvest information. The first reminder letter increased the percentage of total households which had reported their harvest to 69% by December 16, 1993. On December 16 a second reminder letter was sent to a total of 112 households which had not returned any postseason harvest information.

As of February 14, 1994, a total of 423 (95%) permittees had reported their 1993 harvest by either returning the original permit, returning either one of the reminder letters, or telephoning the office to report their harvest. The sum of the subsistence and personal use harvests reported by permit holders as of February 14, 1994, was 7,775 chinook, 8,044 summer chum, 15,285 fall chum, and 4,415 coho salmon. Table 21 contains a summary of the number of salmon harvested by subsistence and personal use permittees organized by fishing location, while Table 22 contains the same information but organizes it by the permittee community of residence. Historical totals of subsistence and personal use combined for permit required areas are summarized in Appendices B.10 and B.11.

Subsistence fishing permits were required by regulation for three Yukon River areas. A total of 310 subsistence permits were issued which included six households which were issued a permit to fish in two permit areas and 30 Minto households that were issued subsistence salmon permits and Tolovana River drainage subsistence pike permits. The reported subsistence catch by 288 permittees who had returned their permits as of February 14, 1994 was 7,349 chinook, 7,370 summer chum, 15,122 fall chum, and 4,415 coho salmon. Historical subsistence permit information is summarized in Appendices B.5 and B.6.

During the 1993 fishing season, personal use fishing permits were required for fishing in the Fairbanks Non-subsistence Zone, which included all of Subdistrict 6-C and a portion of the upper Tanana. A map and description of the Fairbanks Non-subsistence Zone is contained in Figure 6. A total of 137 personal use permits were issued, and the salmon harvest for the 135 permittees who had returned their permit information as of February 14, 1994, was 426 chinook, 674 summer chum, 163 fall chum, and 0 coho salmon. Historical personal use harvest information are summarized in Appendices B.7 and B.8.

Concern for the 1993 fall chum salmon escapement levels prompted the Department to decline issuing any Delta River salmon carcass permits. Possible redd disturbances resulting in reduced survival due to carcass collection activities prompted this action. Historical salmon carcass subsistence and personal use permit information is summarized in Appendix B.9 for households which had previously collected salmon carcasses near the confluence of the Delta and Tanana Rivers.

Subsistence permittees were asked for the number of dogs they owned, if they fed salmon to their dogs, and to record the number of salmon they fed or preserved for dog food. Table 23 details, by community, the number of dogs owned by households which obtained permits and the number of fish fed or preserved for dog food by people who reported their harvests. Appendix B.13 summarizes the available dog and dog related information for 1990 to 1993. Of the 410 permit households, 137 were not asked dog information due to those being personal use permittees and it was illegal to feed fish harvested under personal use regulations to dogs. A total of 273 subsistence permit households reported owning 2,914 dogs, and 137 of those permit households said that they fed whole fish to their dogs. A total of 2,680 whole salmon of unspecified species were reported fed to or preserved for dog food. This is considered a minimum number since the 1993 reminder letters did not ask for salmon fed to dogs.

Subsistence Salmon Obtained from the Commercial Fishery

Table 24 identifies the number of salmon retained from commercial catches and used for subsistence as recorded by fish ticket information and subsistence survey information. An estimated 2,789 chinook and 604 summer chum salmon were retained from commercial catches for subsistence use as documented by the higher district total of either the fish ticket or survey information. An estimated 560 female chinook salmon were available from the commercial related harvest to produce the roe sold in Districts 5 and 6. The estimated District 4 commercial related harvest of female and male summer chum salmon potentially available for subsistence was 42,930 fish. The number of fish actually used for subsistence purposes was less than those potentially available due to nonretention of males, transport of fish out of the surveyed villages, and loss of fish to spoilage or animals. The survey estimated 32,149 summer chum salmon were retained from commercial catches by District 4 households and used for subsistence purposes (Table 15).

DISCUSSION

Conducting a sample survey and administering a permit program in an area as large and diverse as the Yukon River drainage is a difficult and challenging task. This section will discuss the major problems which inhibited efforts to collect the data required to estimate the total subsistence salmon harvest and address any notable differences in survey or permit methodology that were used in 1993.

Subsistence Survey

Estimates of subsistence salmon survey harvests presented in this report are not strictly comparable to estimates obtained in previous years for a number of reasons. Commercially harvested fish retained for subsistence purposes were included in the estimates of subsistence harvests prior to 1988. Surveys conducted prior to 1979 were conducted earlier in the season and undoubtedly documented only a portion of the fall chum and coho salmon harvest information since households fished for fall chum and coho salmon after the survey period. Additionally, the sampling design and questions have changed periodically throughout the history of the program (Brannian and Gnath 1988; Holder and Hamner 1990; Holder and Hamner 1991; Bromaghin and Hamner 1993).

During the personal interviews, surveyors attempted to interview an adult member of each sampled household, preferably the primary fisherman. The quality of the harvest estimate is dependent upon the collection of complete and accurate data. Both the surveyor and the surveyed individual contribute to this estimate. Surveyors have a responsibility to contact all the households to be surveyed and ensure that they ask all the questions clearly, understandably, and foster a cooperative atmosphere. The household being interviewed has the responsibility to accurately answer the questions being asked.

Species identification is a concern in all portions of the drainage. For example, fishermen in the Upper Yukon use the term "silver" to refer to any bright silvery fish; however, both fall chum and coho salmon remain bright late into the season. This problem must continue to be addressed by working with subsistence fishermen concerning species identification and training surveyors in the common species names for each local area. During the 1992 survey, surveyors tried showing pictures of the different salmon species to surveyed people to assist them in identifying the fish they caught. Surveyors reported these pictures were not helpful since people could not associate the fish they harvested with the pictures. It seems that the most useful technique is for surveyors to know the local common names of the fish species. To assist future surveys, surveyors will continue to be provided the common species names on village information sheets.

During the 1991 subsistence survey the questionnaire did not ask any dog or dog-related information of non-subsistence fishing households. This was changed for the 1992 and 1993

surveys, and all surveyed households were asked how many dogs they had and the number of whole salmon fed to those dogs. The difference in asking all households for dog information accounts for the significant increase in the number of dogs reported on the 1992 and 1993 survey results.

During the 1993 fishing season, high water due to rain in the lower Yukon River and the upper Koyukuk regions contributed to the lower number of summer chum salmon harvested, and the foul weather early in the fall season and the poor fall chum salmon run which led to subsistence restrictions and closures contributed to the lower number of fall chum salmon harvested for subsistence. Appendix A.14 shows the 1993 water level information for Eagle and Galena as compared to the historical range. The decrease in the 1993 coho salmon harvest is related to the subsistence restrictions and closures applied to the fall chum salmon which were migrating at the same time.

The District 4 summer chum salmon commercial fishery poses a special problem. The primary commercial product produced from this fishery is processed summer chum salmon roe which is processed into the luxury single egg caviar known as ikura and mainly exported to Japan. A problem with this fishery has been determining the amount of commercial summer chum salmon which has been used to meet subsistence needs, primarily the feeding of dogs. Although used for subsistence, these fish are considered part of the commercial harvest. For that reason, the 1992 and 1993 surveys categorized a fisherman's subsistence catch as either subsistence or a commercial related byproduct. In addition, the separate Subdistrict 4-A interview form asked each commercial fisherman the disposition of their commercially caught salmon. Cross-checking these two survey forms greatly improved both the estimate of the actual summer chum salmon subsistence harvest and the amount of summer chum salmon from the commercial fishery used to meet subsistence needs. Surveyors reported that many Subdistrict 4-A commercial fishermen had only a very general idea of the number of fish they had taken, and just agreed with the department's expanded estimate based on the pounds of roe recorded on their fish tickets. The understanding that selling dried fish from the commercial fishery is illegal probably influenced the answers fishermen gave as to how many fish were given away or sold. Many fishermen also keep their dried fish cached until spring when there is a greater demand, and therefore could not accurately say how they had disposed of their fish.

The 1993 subsistence survey was expanded to ask households what portion of their salmon catch was used for their household, whether their household was given any salmon, and, if so, who gave it to them, a commercial fishermen, another subsistence fishermen, or ADF&G. ADF&G included fish from test fishing projects and an estimated number of fish flown into villages and distributed to help during the poor fall chum salmon run in 1993. These questions were asked to provide the department with better knowledge of the interrelationship between the harvest and sharing, and to identify fishermen who were sharing fish with other people so we could ensure that the fisherman was in the proper catch strata.

Individuals may question the accuracy of the survey in estimating the total harvest of subsistence households in the Yukon Area by comparing the documented numbers of fish given away from the department test fish program, and the airlifted salmon numbers, with survey results. The survey is designed to estimate subsistence salmon harvest and since many of the households that

received fish from the department test fish program were probably nonfishing households it would be expected that the survey estimate would be conservative, even providing for the upper end of the confidence interval.

Identifying all the tributary drainages in which subsistence fishermen have observed coho salmon spawning is an important first step in identifying coho salmon spawning locations in the Yukon River drainage. Department staff need to confirm those spawning locations and nominate or extend the coho information for those streams or locations not currently included in the department's Anadromous Stream Catalog. In 1992 a portion of the surveyed villages and in 1993 all the surveyed households were asked about sightings of coho salmon.

Subsistence Permits

In general, the subsistence fishing permit program is working smoothly. The spring issuing trips and the availability of issuing the permits through the mail and at the local Tok and Delta Fish and Game offices works well for most rural residents. Permit fishermen complying with the weekly telephoning of their catches for Subdistrict 6-C and that portion of Subdistrict 6-B three miles upstream of Totchaket Slough does need attention as evidenced by the postseason harvest records.

Due to changes in the State subsistence law in 1986 which limited subsistence hunting and fishing to rural Alaskan residents, the Board of Fisheries created personal use salmon fisheries in the Yukon Area for non-rural state residents. These regulations primarily affected the greater Fairbanks area. Initially, only a fall chum salmon personal use fishery was implemented in 1987. In 1988, personal use fisheries were created for all salmon. However, the Alaska Supreme Court ruled that, effective July 1, 1990, every resident of the State of Alaska was an eligible subsistence user. In effect, this decision made the personal use category obsolete in the Yukon Area. From 1990 through 1992, all fishermen have fished under subsistence fishing regulations, and no personal use permits have been issued. In 1993 a new ruling created a personal use fishing area in the Fairbanks Non-Subsistence Use Zone which applied to those fishing in waters above Wood River on the Tanana River upstream to the Volkmar River drainage.

Subsistence Restrictions and Closure

It is common and usually necessary for subsistence fishing to be restricted during the commercial fishing season to enforce commercial fishing regulations. During 1993, the chinook and summer chum salmon subsistence fishing season progressed normally. Substantially more subsistence fishing time was allowed during the chinook and summer chum salmon fishing season due to the short commercial fishing season. After the early commercial fishing season, subsistence fishermen in Districts 1, 2, and 3 were placed on a seven-day-per-week subsistence fishing

schedule; Subdistricts 4-B, 4-C, 5-A, 5-B, and 5-C were placed on a five-day-per-week subsistence fishing schedule; Subdistrict 4-A, which does not have a fall commercial fishing season, was placed on a seven-day-per-week fishing schedule beginning Friday, July 16, at the close of the commercial fishing season for 1993; District 6 remained on the regulatory schedule of two 42-hour subsistence/personal use fishing periods per week; and Subdistrict 5-D subsistence fishermen remained on their seven-day-per-week fishing schedule which was not altered during the commercial season due to the small number of commercial permits being fished in this subdistrict.

The department had identified the need for approximately 620,000 fall chum salmon to provide for subsistence and escapement needs throughout the drainage in 1993. Based on preliminary inseason information, the department projected the run size to fall in the range of 350,000 to 500,000 fall chum salmon. This run level would not support normal subsistence harvest levels and meet escapement needs. On August 12, department biologists met via teleconference with representatives of the Yukon River Drainage Fisheries Association (YRDFA) to discuss the status of the fall chum salmon run. Department biologists told fishermen that the run appeared much smaller than expected and recommended that not only should commercial fishing not occur, but also that subsistence fishing should be reduced to 48 hours per week in order to reduce the fall chum salmon subsistence harvest. At the suggestion of YRDFA board members, fishing times were tailored to each area to help subsistence fishermen better cope with the restrictions and to reduce spoilage.

On August 13 the department began announcing that subsistence fishing time was being reduced to a total of 48 hours per week throughout the Yukon River drainage beginning on August 16. Districts 1, 2, 3, and 4 were placed on a two 24-hour periods per week schedule beginning Tuesday, August 17; Subdistricts 5-A and 5-B were placed on a four 12-hour periods per week schedule beginning Tuesday, August 17; Subdistricts 5-C and 5-D were placed on a two 24-hour periods per week schedule beginning Wednesday, August 18; and Subdistricts 6-A and 6-B were placed on a two 24-hour periods per week schedule beginning Sunday, August 22. The personal use fishery in Subdistrict 6-C was closed until further notice at 12 noon Sunday, August 22. Sport fishing for fall chum salmon was closed on August 16. Even though subsistence fishing for salmon was restricted, an emergency regulation was enacted which allowed subsistence fishing for other important species such as whitefish and pike to remain open seven days per week with small mesh nets that would help reduce the incidental salmon catch.

As a result of available information through August 29, the department lowered its total run assessment to a range of 300,000 to 350,000 fall chum salmon. On August 30 the department issued a news release which announced that the subsistence fishing restrictions were being extended to a subsistence salmon fishery closure effective Friday, September 3, 1993, at 6:00 p.m. This closure, while the first year in history that subsistence salmon fishing was closed due to poor returns of salmon, was necessary to ensure that adequate numbers of fall chum salmon reached the spawning grounds. During the subsistence salmon fishing closure, subsistence fishing for other freshwater species was allowed seven days a week throughout the Yukon River drainage with gillnets of 5 inches or less in stretch mesh and other legal gear.

On September 17 subsistence salmon fishing was reopened with limited fishing time based on

timing of fall chum salmon and to allow the subsistence harvest of coho salmon. Beginning September 17, subsistence fishermen in Districts 1, 2, 3, and Subdistrict 4-A were placed on two 24-hour openings per week until October 1, when these districts and subdistrict were reopened to continuous subsistence fishing and the 5 inch mesh restriction was removed. Beginning September 19, subsistence fishermen in Subdistricts 4-B and 4-C and its tributaries were placed on two 24-hour openings per week until October 1, when these subdistricts were reopened to continuous subsistence fishing and the 5 inch mesh restriction was removed. Beginning Monday, September 27, subsistence fishermen in Subdistricts 5-B, 5-C, and 5-D and its tributaries were reopened to continuous subsistence fishing and the 5 inch mesh restriction was removed. A single 24-hour subsistence opening occurred beginning at 6:00 p.m. Wednesday, September 22, in Subdistricts 5-A, 6-A, and 6-B, excluding the Kantishna River drainage, to assist in evaluating the strength of Tanana River coho salmon stocks. The department estimated that approximately 6,100 chum salmon and 2,860 coho salmon were caught in 20 fish wheels and 8 set gillnets. Due to the high percentage of chum salmon caught in the test opening and the low percentage of coho salmon, the department did not allow any additional subsistence salmon openings. The department reopened subsistence fishing opportunities to seven days per week in Subdistricts 5-A, 6-A, and 6-B beginning Saturday, October 16.

RECOMMENDATIONS

Although some surveyed individuals may accurately recall the numbers of salmon they harvested during the fishing season, others are only able to provide rough approximations. Minimizing this problem requires fishermen to accurately remember or record their subsistence salmon harvests. The department currently uses catch calendars which are mailed preseason to all Yukon River households to encourage all fishing households to record their harvests. Based on the low number of completed catch calendars which fishermen return to the department, using complimentary pens as a reminder program for encouraging using catch calendars to document salmon harvest should be continued. Other incentive programs that might be successful need to be investigated.

Community household lists have formed the basis of the sampling frame since 1988 (Walker et al. 1989). Each year surveyors have attempted to update the list by having knowledgeable individuals in each community review and update the list. This process alone is not sufficient to maintain a complete and accurate community household list due to the dynamic nature of most community households. Because the conclusions obtained from the sampling program are based on the collection of households from which it is drawn, it is necessary that the village household lists be as accurate as possible. The use of the 1991 permanent fund application list was extremely helpful in updating the 1992 and 1993 sampling frames. Several village organizations were willing to share their community household lists which they had prepared for village census purposes. Where available, other community lists, such as telephone and utility lists, were also reviewed. One of the largest problems with the sampling frame is that, even though it is updated annually, it is a full year from the update to when the next sampling occurs. Methods for updating and maintaining an accurate sampling frame must continually be explored. Additional effort should be expended to minimize the size of the unknown use strata. Since printing the unknown -catch category households as a separate list to investigate was successful, this should be continued annually.

Problems with ambiguous or confusing questions on the interview form have been troublesome, although continued peer review of the survey instrument by staff and additional training time for surveyors should minimize this problem.

Participation by subsistence fishing households in the subsistence survey program is completely voluntary. No regulation or statute exists that requires subsistence fishermen to record or report their subsistence salmon harvest. In general, fisherman cooperation has been good, but approximately one fisherman per village typically declines to participate in the survey. As the department responsible for managing the returning salmon runs to provide for a sustained yield of the species, the greater the error in the estimate of the subsistence harvest, the more difficult it becomes to manage the fisheries for sustained yield. A regulatory or statutory requirement for fishermen to record and report their subsistence harvests might improve the accuracy of the harvest estimate.

Another significant problem relating to the quality of the harvest estimate is the fact that only

80% of the households to be sampled were actually contacted. Methods recommended to increase contact rates, such as spending more time in the villages and increasing the effort to make contacts via the telephone and postal system, have been investigated. It appears that spending more time in the villages is the only practical method of increasing our contacts. Surveyors are to telephone ahead to ensure the village visit will not conflict with activities such as funerals or special meetings, which either can take people out of town or just be an inappropriate time to survey the village, thereby making the village visit not as productive as it could be. Telephone contacts are restrained due to the limited availability of telephones in the villages and the reluctance of people to make a long distance telephone call, even when we have requested that they call collect. It is recommended that the surveyors attempt contacting those households that were not surveyed by phone in the evening time, and those households that do not have phones should be sent a post card requesting them to call the department collect.

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Table 1. Subsistence and personal use salmon harvest estimates and related information for the Alaskan portion of the Yukon River drainage, 1993. a

Village	Survey Date		Fishing Households	Dogs	Chinook	Summer Chum	Fall Chum	Coho	Set Nets	Drift Nets	Fish Wheels
Hooper Bay	9/14-9/15	c	75	253	230	16,106	113	0	75	0	0
Scammon Bay	9/13-9/14		55	138	1,199	4,692	7	40	55	0	0
Bering Sea Coast Subtotal			130	391	1,429	20,798	120	40	130	0	0
Sheldon Pt.	9/10		23	38	561	2,362	158	78	21	2	0
Alakanuk	9/8-9/9, 9/11		74	148	2,562	8,935	182	138	41	33	0
Emmonak	9/7-9/10	d	73	248	4,372	15,568	1,507	196	35	38	0
Kotlik	9/24-9/25	e	76	256	2,913	7,121	5,923	1,931	53	23	0
Retained from Commercial		f			15	299	0	0			
District 1 Subtotal			246	690	10,423	34,285	7,770	2,343	150	96	0
Mt. Village	9/17- 9/18		124	262	3,217	10,505	1,113	447	4	120	0
Pitkas Pt.	9/18		14	79	1,001	1,481	268	349	1	13	0
St. Marys	9/16, 9/18, 9/24		47	128	2,042	5,925	440	102	8	39	0
Pilot Station	9/21-9/22	g	46	106	2,661	5,641	1,017	477	5	41	0
Marshall	9/23		55	305	2,592	1,745	256	320	10	45	0
Retained from Commercial					3	120	0	0			
District 2 Subtotal			286	880	11,516	25,417	3,094	1,695	28	258	0
Russian Mission	9/24		27	152	3,273	1,838	172	152	11	16	0
Holy Cross	9/21		37	190	3,191	1,517	1,066	88	11	26	0
Retained from Commercial					10	21	0	0			
District 3 Subtotal			64	342	6,474	3,376	1,238	240	22	42	0
Lower Yukon River Drainage Total			726	2,303	29,842	83,876	12,222	4,318	330	396	0
Anvik	9/22		17	221	663	1,735	420	115	11	4	2
Grayling	9/22-9/23		26	145	1,045	1,137	2,083	164	20	4	2
Kaltag	10/5-10/6		31	137	1,260	1,116	704	334	7	14	10
Nulato	10/5-10/6		28	172	1,660	15	571	37	6	17	5
Koyukuk	10/7		19	80	853	230	2,052	70	8	4	7
Galena	10/7-10/8, 10/22		62	289	1,732	2,477	3,255	124	28	13	21
Ruby	11/1		19	193	3,263	1,459	1,085	308	7	0	12
Retained from Commercial		h			978	-	0	0			
District 4 Yukon R. Subtotal		i	202	1,237	11,454	8,169	10,170	1,152	87	56	59
Shageluk											
Innoko R. Subtotal	9/20	j	12	105	128	4,183	211	39	11	0	1
Huslia	10/21-9/22		15	191	232	8,343	258	9	15	0	0
Hughes	10/20		8	46	88	827	169	3	8	0	0
Allakaket	10/27		12	106	135	2,651	233	3	12	0	0
Alatna	10/28		3	15	4	52	2	0	3	0	0
Bettles	10/28		3	50	1	34	0	0	3	0	0
Koyukuk R. Subtotal			41	408	460	11,907	662	15	41	0	0
District 4 Subtotal			255	1,750	12,042	24,259	11,043	1,206	139	56	60
Tanana	10/14-10/15		34	664	3,362	4,245	23,103	5,576	16	0	18
Rampart	10/20-10/21		16	128	1,956	1,489	3,272	38	11	0	5
Fairbanks NSB	permits	k	30	733	1,514	465	930	0	27	0	3
Stevens Village	10/27	l	16	61	1,754	653	862	0	16	0	0
Birch Creek	10/29		0	6	0	0	0	0	0	0	0
Beaver	10/27		12	66	1,557	134	692	135	12	0	0
Ft. Yukon	10/19-10/25		60	476	6,361	3,830	2,380	5	25	0	35
Circle	permits	m	8	80	745	83	349	10	4	0	4
Central	permits	n	8	27	210	2	0	0	7	0	1
Eagle	permits	o	25	176	753	32	2,070	85	22	0	3
Other	permits	p	5	15	437	24	1,750	0	3	0	2
Retained from Commercial					746	159	0	0			
District 5 Yukon R. Subtotal			214	2,432	19,395	11,116	35,408	5,849	143	0	71

-Continued-

Table 1. (p. 2 of 2). a

Village	Survey Date	b	Fishing Households	Dogs	Chinook	Summer Chum	Fall Chum	Coho	Set Nets	Drift Nets	Fish Wheels
Venetie	10/30-10/31, 12/10-11		28	346	2,716	129	7,881	135	28	0	0
Chalkyitsik	10/27-10/28, 12/13-14		4	93	0	0	475	0	4	0	0
Chandalar/Black Rivers Subtotal			32	439	2,716	129	8,356	135	32	0	0
District 5 Subtotal			246	2,871	22,111	11,245	43,764	5,984	175	0	71
Manley	permits	q	16	507	238	1,310	3,215	1,535	12	0	4
Minto	permits	r	11	247	468	367	301	300	7	0	4
Nenana	permits	s	23	698	693	5,019	5,929	1,314	11	0	12
Healy	permits	t	2	65	0	0	351	1,155	1	0	1
Fairbanks NSB	permits	u	87	340	699	771	219	0	77	0	10
Delta Junction	permits	v	3	0	0	0	1	0	3	0	0
Other	permits	w	7	0	0	0	0	0	6	0	1
Retained from Commercial					1,037	5					
District 6 Tanana R. Subtotal			149	1,857	3,135	7,472	10,016	4,304	117	0	32
Upper Yukon River Drainage Total			650	6,478	37,288	42,976	64,823	11,494	431	56	163
Survey Subtotals			1,151	5,893	56,529	111,966	57,586	9,981	581	452	118
Permit Subtotals (w/out Stevens Village)			225	2,888	5,757	8,040	15,050	4,399	180	0	45
ADF&G Test Fish Subtotals					2,055	6,242	4,409	1,432			
Retained from Commercial Subtotals					2,789	604	0	0			
			1,376	8,781	67,130	126,852	77,045	15,812	761	452	163
Alaska, Yukon River Drainage Total			1,376	8,781	67,130	126,852	77,045	15,812	761	452	163

a Data collected by Commercial Fisheries Management and Development Division. Survey data is expanded for number of fishing households, number of dogs, and catch data. Permit data is unexpanded, the number of dogs is based on permits issued while the number of fishing households and their catch is based on returned permits. Gear data represents the principal gear types used by fishing households with exceptions of other gear types not listed.

b Estimated number of households that fished in surveyed communities or number of permittees who reported fishing in permit required areas.

c A tagging study conducted at Hooper Bay in 1986 by the Bering Sea Fishermen's Association concluded that harvests in the Nouk Spit area of Hooper Bay intercepted Yukon River and Norton Sound chum salmon stocks.

d Includes 1,284 chinook, 2,846 summer chum, 1,364 fall chum, and 180 coho salmon from ADF&G test fish catches.

e Includes 300 chinook, 1,265 summer chum, 2,328 fall chum, and 1,030 coho salmon from ADF&G test fish catches.

f Salmon retained from commercial catches and used for subsistence purposes as recorded from fish tickets or reported during subsistence surveys, whichever District total was higher.

g Includes 471 chinook, 2,098 summer chum, 652 fall chum, and 222 coho salmon from ADF&G test fish catches.

h Summer chum salmon available for subsistence use as a product of the commercial roe fishery were recorded as commercial related harvest.

i Does not include 32,149 summer chum salmon taken during commercial roe fishery used for subsistence.

j Shageluk harvest data from households fishing mainstem Yukon River and Innoko River.

k Data from Fairbanks North Star Borough fishermen who fished the Yukon River in a permit required area. Of the 39 permits issued, 39 returned their permits and 30 fished.

l Permit harvest information from Stevens Village residents was included in the survey data.

m Circle. Of the 19 permits issued, 19 returned their permits and 8 fished.

n Central. Of the 14 permits issued, 14 returned their permits and 8 fished.

o Eagle. Of the 35 permits issued, 35 returned their permits and 25 fished.

p Other includes residents of Manley, Minto, Nenana, Rampart and Tok who fished the Yukon River in a permit area. Of the 9 permits issued, 8 returned their permits and 5 fished.

q Manley . Of the 26 permits issued, 25 returned their permits and 16 fished. Includes 33 summer chum and 65 fall chum salmon from ADF&G's test fish wheel (died in the live box).

r Minto. Of the 40 permits issued, 33 returned their permits and 11 fished.

s Nenana. Of the 51 permits issued, 48 returned their permits and 23 fished.

t Healy. Of the 5 permits issued, 5 returned their permits and 2 fished.

u Data from Fairbanks North Star Borough fishermen who fished the Tanana River. Of the 153 permits issued, 151 returned their permits and 87 fished.

v Delta. Of the 4 permits issued, 4 returned their permits and 3 fished.

w Other includes residents of Anchorage, Dot Lake, Northway, Paxson, and Tok who fished the Tanana River. Of the 9 permits issued, 9 returned their permits and 7 fished.

Table 2. Yukon Area department test fish reported given away for subsistence purposes, 1993.

	Chinook	Summer Chum	Fall Chum	Coho
Emmonak [a]	1,284	2,846	1,364	180
Kotlik [b]	300	1,265	2,328	1,030
Pilot Station [c]	471	2,098	652	222
Manley [d]	0	33	65	0
Nenana [e]	0	0	0	0
Tanana North [f]	0	0	0	0
Tanana South [g]	0	0	0	0
Total	2,055	6,242	4,409	1,432

[a] Big Eddy set and drift net test fishing projects.
[b] Middle Mouth set net test fishing project.
[c] Pilot Station Sonar drift net test fishing project.
[d] Manley fishwheel test fishing project.
[e] Nenana fishwheel test fishing project.
[f] Tanana North Bank fishwheel test fishing project.
[g] Tanana South Bank fishwheel test fishing project.

Table 3. Yukon Area villages, surveyors, and dates villages were surveyed for subsistence salmon harvest and use, 1993.

Community	Surveyor(s)	Survey Date(s)
Scammon Bay	Edmund	9/13-14
Hooper Bay	Chapell/Edmund	9/13-15
Sheldon Point	Chapell/Edmund	9/10
Alakanuk	Chapell/Edmund	9/8-9,11
Emmonak	Holder	9/7-10
Kotlik	Chapell	9/24-25
Mountain Village	Chapell/Edmund	9/17-18
Pitka's Point	Chapell/Edmund	9/18
St. Mary's	Chapell/Edmund	9/16,18,24
Pilot Station	Edmund	9/21-22
Marshall	Edmund	9/23
Russian Mission	Edmund	9/24
Holy Cross	Holder/Chapell	9/21
Anvik	Holder	9/22
Grayling	Holder/Chapell	9/22-23
Shageluk	Chapell	9/20
Kaltag	Holder/Chapell	10/5-6
Nulato	Holder/Chapell	10/5-6
Koyukuk	Chapell	10/7
Galena	Holder/Marcotte/Chapell	10/7-8,22
Ruby	Schultz	11/1
Huslia	Chapell	10/21-22
Hughes	Chapell	10/20
Allakaket	Chapell	10/27
Alatna	Chapell	10/28
Bettles	Chapell	10/28
Tanana	Holder/Andersen/Marcotte	10/14-15
Rampart	Marcotte	10/20-21
Stevens Village	Marcotte	10/27
Beaver	Andersen	10/27
Birch Creek	Alexander	10/29
Fort Yukon	Andersen/Alexander	10/19-25
Chalkyitsik	Alexander/Andersen	10/30-31, 12/10-11
Venetie	Alexander	10/27-28, 12/13-14

Table 4. The total number of households (N), the sample size (n), the number contacted (C) and the percentage of the sampled households that were contacted (%C) by catch stratum with community use category, district, and Yukon Area totals, 1993.

	Unknown Catch				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Community Totals			
Community	N	n	C	%C	N	n	C	%C	N	n	C	%C	N	n	C	%C	N	n	C	%C	N	n	C	%C
Hooper Bay	86	17	15	88.2	8	5	5	100.0	26	8	4	50.0	17	17	15	88.2	3	3	3	100.0	140	50	42	84.0
Scammon Bay	53	11	8	72.7	7	5	5	100.0	23	7	7	100.0	7	7	6	85.7	0	0	0	-	90	30	26	86.6
Sheldon's Point	3	3	3	100.0	2	2	1	50.0	17	17	15	88.2	8	8	8	100.0	0	0	0	-	30	30	27	90.0
Alakanuk	8	5	3	60.0	40	5	5	100.0	63	19	17	89.4	11	11	10	90.9	0	0	0	-	22	40	35	87.5
Emmonak	34	7	5	71.4	55	17	13	76.4	55	28	24	85.7	11	11	10	90.9	1	1	1	100.0	156	64	53	82.8
Kotlik	20	5	3	60.0	22	5	3	60.0	43	13	13	100.0	14	14	13	92.8	4	4	4	100.0	103	41	36	87.8
District 1	**204**	**48**	**37**	**77.0**	**134**	**39**	**32**	**82.0**	**227**	**92**	**80**	**86.9**	**68**	**68**	**62**	**91.1**	**8**	**8**	**8**	**100.0**	**641**	**255**	**219**	**85.8**
Mountain Village	27	5	3	60.0	44	5	4	80.0	65	20	18	90.0	18	18	14	77.7	1	1	1	100.0	155	49	40	81.6
Pitkas Point	7	7	5	71.4	5	5	4	80.0	8	8	8	100.0	7	7	7	100.0	0	0	0	-	27	27	24	88.8
St. Mary's	25	5	3	60.0	20	5	5	100.0	37	11	10	90.9	22	22	21	95.4	4	4	4	100.0	108	47	43	91.4
Pilot Station	8	5	4	80.0	36	11	10	90.9	47	24	23	95.8	4	4	3	75.0	1	1	0	0.0	96	45	40	88.8
Marshall	5	5	5	100.0	10	5	4	80.0	48	14	12	85.7	7	7	7	100.0	1	1	1	100.0	71	32	29	90.6
District 2	**72**	**27**	**20**	**74.0**	**115**	**31**	**27**	**87.0**	**205**	**77**	**71**	**92.2**	**58**	**58**	**52**	**89.6**	**7**	**7**	**6**	**85.7**	**457**	**200**	**176**	**88.0**
Russian Mission	7	5	2	40.0	17	5	5	100.0	27	8	8	100.0	7	7	7	100.0	1	1	0	0.0	59	26	22	84.6
Holy Cross	31	6	4	66.6	14	5	4	80.0	26	13	10	76.9	9	9	9	100.0	2	2	2	100.0	82	35	29	82.8
District 3	**38**	**11**	**6**	**54.5**	**31**	**10**	**9**	**90.0**	**53**	**21**	**18**	**85.7**	**16**	**16**	**16**	**100.0**	**3**	**3**	**2**	**66.6**	**141**	**61**	**51**	**83.6**
Anvik	2	2	1	50.0	15	5	4	80.0	14	5	5	100.0	5	5	5	100.0	3	3	3	100.0	39	20	18	90.0
Grayling	4	4	1	25.0	19	5	5	100.0	7	5	4	80.0	20	20	20	100.0	4	4	4	100.0	54	38	34	89.4
Kaltag	6	5	4	80.0	12	5	2	40.0	20	6	6	100.0	13	13	12	92.3	2	2	2	100.0	53	31	26	83.8
Nulato	27	5	4	80.0	33	5	4	80.0	20	6	6	100.0	14	14	14	100.0	1	1	1	100.0	95	31	29	93.5
Koyukuk	6	5	4	80.0	15	5	4	80.0	16	5	5	100.0	4	4	4	100.0	2	2	2	100.0	43	21	19	90.4
Galena	44	9	8	88.8	61	6	6	100.0	52	16	13	81.2	16	16	15	93.7	3	3	3	100.0	176	50	45	90.0
Ruby	21	5	3	60.0	33	5	4	80.0	17	5	4	80.0	11	11	9	81.8	5	5	5	100.0	87	31	25	80.6
Shageluk	7	5	5	100.0	11	5	4	80.0	9	5	5	100.0	10	10	10	100.0	3	3	3	100.0	40	28	27	96.4
Huslia	15	5	3	60.0	28	5	5	100.0	12	5	5	100.0	11	11	11	100.0	5	5	5	100.0	71	31	29	93.5
Hughes	2	2	2	100.0	4	4	4	100.0	7	7	7	100.0	6	6	6	100.0	0	0	0	-	19	19	19	100.0
Allakaket	5	5	5	100.0	13	5	5	100.0	12	5	4	80.0	11	11	11	100.0	2	2	2	100.0	43	28	27	96.4
Alatna	0	0	0	-	5	5	5	100.0	2	2	2	100.0	4	4	3	75.0	0	0	0	-	11	11	10	90.9
Bettles	7	7	5	71.4	20	20	19	95.0	6	6	6	100.0	0	0	0	-	0	0	0	-	33	33	30	90.9
District 4	**146**	**59**	**45**	**76.2**	**269**	**80**	**71**	**88.7**	**194**	**78**	**72**	**92.3**	**125**	**125**	**120**	**96.0**	**30**	**30**	**30**	**100.0**	**764**	**372**	**338**	**90.8**
Tanana	26	5	2	40.0	55	6	5	83.3	19	6	4	66.6	12	12	7	58.3	22	22	19	86.3	134	51	37	72.5
Rampart	0	0	0	-	10	10	8	80.0	3	3	2	66.6	8	8	7	87.5	6	6	6	100.0	27	27	23	85.1
Stevens Village	2	2	1	50.0	16	16	12	75.0	6	6	6	100.0	5	5	5	100.0	4	4	2	50.0	33	33	26	78.7
Birch Creek	3	3	2	66.6	10	10	4	40.0	6	6	4	66.6	0	0	0	-	0	0	0	-	19	19	10	52.6
Beaver	0	0	0	-	15	15	9	60.0	12	12	8	66.6	5	5	5	100.0	1	1	0	0.0	33	33	22	66.6
Fort Yukon	71	14	7	50.0	89	9	6	66.6	38	11	6	54.5	23	23	16	69.5	7	7	7	100.0	228	64	42	65.6
Venetie	31	6	3	50.0	22	7	4	57.1	7	5	3	60.0	9	9	6	66.6	1	1	0	0.0	70	28	16	57.1
Chalkyitsik	5	5	2	40.0	18	18	9	50.0	7	7	4	57.1	4	4	4	100.0	0	0	0	-	34	34	19	55.8
District 5	**138**	**35**	**17**	**48.5**	**235**	**91**	**57**	**61.2**	**98**	**56**	**37**	**66.0**	**66**	**66**	**50**	**75.7**	**41**	**41**	**34**	**82.9**	**578**	**289**	**195**	**67.0**
Survey Totals	**598**	**180**	**125**	**69.4**	**784**	**251**	**196**	**77.4**	**777**	**324**	**278**	**85.8**	**333**	**333**	**300**	**90.0**	**89**	**89**	**80**	**89.8**	**2,581**	**1,177**	**979**	**83.0**

Table 5. Estimated number of subsistence fishing households in Yukon Area surveyed villages, by catch stratum, with village and district totals; N indicates the total number of households and n indicates the number of households contacted, 1993.

	Unknown Catch				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total		Est	CI(95%)
Community	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)
Hooper Bay	86	15	0.5	0.1	8	5	0.0	0.0	26	4	0.7	0.2	17	15	0.5	0.0	3	3	0.3	0.0	140	42	75	23
Scammon Bay	53	8	0.6	0.1	7	5	0.4	0.1	23	7	0.5	0.1	7	6	0.8	0.0	0	0	-	-	90	26	55	19
Sheldon's Point	3	3	0.3	0.0	2	1	1.0	0.0	17	15	0.8	0.0	8	8	0.7	0.0	0	0	-	-	30	27	23	1
Alakanuk	8	3	0.3	0.2	40	5	0.4	0.2	63	17	0.7	0.0	11	10	1.0	0.0	0	0	-	-	122	35	74	22
Emmonak	34	5	0.4	0.2	55	13	0.5	0.1	55	24	0.3	0.0	11	10	0.7	0.0	1	1	1.0	0.0	156	53	73	21
Kotlik	20	3	0.6	0.3	22	3	0.6	0.3	43	13	0.6	0.1	14	13	1.0	0.0	4	4	1.0	0.0	103	36	76	20
District 1	**204**	**37**	**0.5**	**0.0**	**134**	**32**	**0.5**	**0.0**	**227**	**80**	**0.6**	**0.0**	**68**	**62**	**0.8**	**0.0**	**8**	**8**	**0.8**	**0.0**	**641**	**219**	**376**	**47**
Mountain Village	27	3	0.6	0.3	44	4	0.7	0.2	65	18	0.8	0.0	18	14	1.0	0.0	1	1	1.0	0.0	155	40	124	28
Pitkas Point	7	5	0.6	0.1	5	4	0.2	0.1	8	8	0.2	0.0	7	7	1.0	0.0	0	0	-	-	27	24	14	2
St. Mary's	25	3	0.0	0.0	20	5	0.0	0.0	37	10	0.6	0.1	22	21	0.9	0.0	4	4	1.0	0.0	108	43	47	10
Pilot Station	8	4	0.0	0.0	36	10	0.3	0.1	47	23	0.6	0.0	4	3	1.0	0.0	1	0	1.0	0.0	96	40	46	11
Marshall	5	5	0.4	0.0	10	4	0.5	0.2	48	12	0.8	0.0	7	7	1.0	0.0	1	1	1.0	0.0	71	29	55	10
District 2	**72**	**20**	**0.3**	**0.1**	**115**	**27**	**0.4**	**0.1**	**205**	**71**	**0.7**	**0.0**	**58**	**52**	**1.0**	**0.0**	**7**	**6**	**1.0**	**0.0**	**457**	**176**	**286**	**33**
Russian Mission	7	2	0.0	0.0	17	5	0.2	0.1	27	8	0.6	0.1	7	7	0.8	0.0	1	0	1.0	0.0	59	22	27	9
Holy Cross	31	4	0.2	0.2	14	4	0.2	0.2	26	10	0.7	0.1	9	9	0.6	0.0	2	2	1.0	0.0	82	29	37	16
District 3	**38**	**6**	**0.2**	**0.1**	**31**	**9**	**0.2**	**0.1**	**53**	**18**	**0.7**	**0.0**	**16**	**16**	**0.8**	**0.0**	**3**	**2**	**1.0**	**0.0**	**141**	**51**	**64**	**19**
Anvik	2	1	0.0	0.0	15	4	0.2	0.2	14	5	0.6	0.1	5	5	0.4	0.0	3	3	1.0	0.0	39	18	17	8
Grayling	4	1	0.0	0.0	19	5	0.2	0.1	7	4	0.7	0.1	20	20	0.7	0.0	4	4	0.7	0.0	54	34	26	6
Kaltag	6	4	0.2	0.1	12	2	0.0	0.0	20	6	0.8	0.1	13	12	0.8	0.0	2	2	1.0	0.0	53	26	31	5
Nulato	27	4	0.2	0.2	33	4	0.0	0.0	20	6	0.5	0.1	14	14	0.7	0.0	1	1	0.0	0.0	95	29	28	14
Koyukuk	6	4	0.5	0.1	15	4	0.2	0.2	16	5	0.4	0.2	4	4	1.0	0.0	2	2	1.0	0.0	43	19	19	9
Galena	44	8	0.1	0.1	61	6	0.1	0.1	52	13	0.6	0.1	16	15	0.7	0.0	3	3	1.0	0.0	176	45	62	24
Ruby	21	3	0.0	0.0	33	4	0.0	0.0	17	4	0.5	0.2	11	9	0.6	0.0	5	5	0.6	0.0	87	25	19	8
Shageluk	7	5	0.2	0.1	11	4	0.2	0.1	9	5	0.0	0.0	10	10	0.5	0.0	3	3	1.0	0.0	40	27	12	4
Huslia	15	3	0.0	0.0	28	5	0.2	0.1	12	5	0.0	0.0	11	11	0.5	0.0	5	5	0.6	0.0	71	29	15	9
Hughes	2	2	0.0	0.0	4	4	0.0	0.0	7	7	0.4	0.0	6	6	0.8	0.0	0	0	-	-	19	19	8	0
Allakaket	5	5	0.0	0.0	13	5	0.0	0.0	12	4	0.2	0.2	11	11	0.6	0.0	2	2	1.0	0.0	43	27	12	4
Alatna	0	0	-	-	5	5	0.2	0.0	2	2	0.5	0.0	4	3	0.3	0.1	0	0	-	-	11	10	3	1
Bettles	7	5	0.0	0.0	20	19	0.0	0.0	6	6	0.5	0.0	0	0	-	-	0	0	-	-	33	30	3	0
District 4	**146**	**45**	**0.1**	**0.0**	**269**	**71**	**0.1**	**0.0**	**194**	**72**	**0.5**	**0.0**	**125**	**120**	**0.7**	**0.0**	**30**	**30**	**0.8**	**0.0**	**764**	**338**	**255**	**35**
Tanana	26	2	0.0	0.0	55	5	0.0	0.0	19	4	0.2	0.2	12	7	0.5	0.1	22	19	1.0	0.0	134	37	34	8
Rampart	0	0	-	-	10	8	0.1	0.0	3	2	1.0	0.0	8	7	0.8	0.0	6	6	0.8	0.0	27	23	16	1
Stevens Village	2	1	0.0	0.0	16	12	0.2	0.0	6	6	0.8	0.0	5	5	1.0	0.0	4	2	0.5	0.3	33	26	16	3
Birch Creek	3	2	0.0	0.0	10	4	0.0	0.0	6	4	0.0	0.0	0	0	-	-	0	0	-	-	19	10	0	0
Beaver	0	0	-	-	15	9	0.1	0.0	12	8	0.5	0.1	5	5	0.6	0.0	1	0	0.9	0.0	33	22	12	3
Fort Yukon	71	7	0.2	0.1	89	6	0.1	0.1	38	6	0.1	0.1	23	16	0.5	0.0	7	7	0.8	0.0	228	42	60	39
Venetie	5	2	0.0	0.0	18	9	0.0	0.0	7	4	0.2	0.1	4	4	0.5	0.0	0	0	-	-	34	19	4	2
District 5	**138**	**17**	**0.2**	**0.1**	**235**	**57**	**0.1**	**0.0**	**98**	**37**	**0.3**	**0.0**	**66**	**50**	**0.6**	**0.0**	**41**	**34**	**0.9**	**0.0**	**578**	**195**	**170**	**45**
Survey Totals	**598**	**125**	**0.3**	**0.0**	**784**	**196**	**0.2**	**0.0**	**777**	**278**	**0.6**	**0.0**	**333**	**300**	**0.7**	**0.0**	**89**	**80**	**0.9**	**0.0**	**2,581**	**979**	**1,151**	**84**

Table 6. Reported use of fishing gear by surveyed subsistence fishing households, Yukon Area, 1993.

Community	Total Households	Households Surveyed	Subsistence Fished	Gear Type Used: Set Gillnets	Drift Gillnets	Fishwheels	Rod & Reel	Drift/Set Combo
Hooper Bay	140	42 (30.0%)	20 (47.6%)	20 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Scammon Bay	90	26 (28.8%)	16 (61.5%)	16 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Sheldon's Point	30	27 (90.0%)	20 (74.0%)	18 (90.0%)	2 (10.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Alakanuk	122	35 (28.6%)	25 (71.4%)	14 (56.0%)	11 (44.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Emmonak	156	53 (33.9%)	26 (49.0%)	12 (48.0%)	11 (44.0%)	0 (0.0%)	0 (0.0%)	2 (8.0%)
Kotlik	103	36 (34.9%)	30 (83.3%)	21 (70.0%)	9 (30.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
District 1	**641**	**219 (34.1%)**	**137 (62.5%)**	**101 (74.2%)**	**33 (24.2%)**	**0 (0.0%)**	**0 (0.0%)**	**2 (1.4%)**
Mountain Village	155	40 (25.8%)	35 (87.5%)	1 (2.8%)	34 (97.1%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Pitkas Point	27	24 (88.8%)	13 (54.1%)	1 (7.6%)	10 (76.9%)	0 (0.0%)	1 (7.6%)	1 (7.6%)
St. Mary's	108	43 (39.8%)	30 (69.7%)	5 (16.6%)	25 (83.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Pilot Station	96	40 (41.6%)	21 (52.5%)	2 (9.5%)	19 (90.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Marshall	71	29 (40.8%)	22 (75.8%)	4 (18.1%)	18 (81.8%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
District 2	**457**	**176 (38.5%)**	**121 (68.7%)**	**13 (10.7%)**	**106 (87.6%)**	**0 (0.0%)**	**1 (0.8%)**	**1 (0.8%)**
Russian Mission	59	22 (37.2%)	12 (54.5%)	5 (41.6%)	7 (58.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Holy Cross	82	29 (35.3%)	17 (58.6%)	5 (29.4%)	11 (64.7%)	0 (0.0%)	0 (0.0%)	1 (5.8%)
District 3	**141**	**51 (36.1%)**	**29 (56.8%)**	**10 (34.4%)**	**18 (62.0%)**	**0 (0.0%)**	**0 (0.0%)**	**1 (3.4%)**
Anvik	39	18 (46.1%)	9 (50.0%)	6 (66.6%)	2 (22.2%)	1 (11.1%)	0 (0.0%)	0 (0.0%)
Grayling	54	34 (62.9%)	21 (61.7%)	16 (76.1%)	3 (14.2%)	2 (9.5%)	0 (0.0%)	0 (0.0%)
Kaltag	53	26 (49.0%)	18 (69.2%)	4 (22.2%)	8 (44.4%)	6 (33.3%)	0 (0.0%)	0 (0.0%)
Nulato	95	29 (30.5%)	15 (51.7%)	3 (20.0%)	9 (60.0%)	3 (20.0%)	0 (0.0%)	0 (0.0%)
Koyukuk	43	19 (44.1%)	11 (57.8%)	4 (40.0%)	2 (20.0%)	4 (40.0%)	0 (0.0%)	0 (0.0%)
Galena	176	45 (25.5%)	24 (53.3%)	11 (45.8%)	5 (20.8%)	8 (33.3%)	0 (0.0%)	0 (0.0%)
Ruby	87	25 (28.7%)	11 (44.0%)	4 (36.3%)	0 (0.0%)	7 (63.6%)	0 (0.0%)	0 (0.0%)
Shageluk	40	27 (67.5%)	10 (37.0%)	8 (88.8%)	0 (0.0%)	1 (11.1%)	0 (0.0%)	0 (0.0%)
Huslia	71	29 (40.8%)	10 (34.4%)	10 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Hughes	19	19 (100.0%)	8 (42.1%)	8 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Allakaket	43	27 (62.7%)	10 (37.0%)	10 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Alatna	11	10 (90.9%)	3 (30.0%)	3 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Bettles	33	30 (90.9%)	3 (10.0%)	3 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
District 4	**764**	**338 (44.2%)**	**153 (45.2%)**	**90 (59.6%)**	**29 (19.2%)**	**32 (21.1%)**	**0 (0.0%)**	**0 (0.0%)**
Tanana	134	37 (27.6%)	24 (64.8%)	11 (45.8%)	0 (0.0%)	13 (54.1%)	0 (0.0%)	0 (0.0%)
Rampart	27	23 (85.1%)	14 (60.8%)	10 (71.4%)	0 (0.0%)	4 (28.5%)	0 (0.0%)	0 (0.0%)
Stevens Village	33	26 (78.7%)	14 (53.8%)	14 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Birch Creek	19	10 (52.6%)	0 (0.0%)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)
Beaver	33	22 (66.6%)	8 (36.3%)	7 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Fort Yukon	228	42 (18.4%)	19 (45.2%)	8 (42.1%)	0 (0.0%)	11 (57.8%)	0 (0.0%)	0 (0.0%)
Venetie	70	16 (22.8%)	8 (50.0%)	8 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Chalkyitsik	34	19 (55.8%)	3 (15.7%)	3 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
District 5	**578**	**195 (33.7%)**	**90 (46.1%)**	**61 (68.5%)**	**0 (0.0%)**	**28 (31.4%)**	**0 (0.0%)**	**0 (0.0%)**
Survey Totals	**2,581**	**979 (37.9%)**	**530 (54.1%)**	**275 (52.2%)**	**186 (35.3%)**	**60 (11.4%)**	**1 (0.1%)**	**4 (4.0%)**

Table 7. Estimated number of people per household and total number of people by community, district, and catch stratum, for Yukon Area surveyed villages; N indicates the total number of households and n indicates the number of households contacted, 1993.

Community	Unknown Catch				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total		Est	CI (95%)
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)
Hooper Bay	86	15	5.2	0.5	8	5	3.0	0.1	26	4	5.7	1.7	17	15	5.8	0.2	3	3	4.6	0.0	140	42	734	123
Scammon Bay	53	8	4.7	0.8	7	5	3.8	0.3	23	7	6.1	1.4	7	6	5.3	0.1	0	0	-	-	90	26	457	112
Sheldon's Point	3	3	3.3	0.0	2	1	3.0	0.3	17	15	4.6	0.2	8	8	7.0	0.0	0	0	-	-	30	27	150	6
Alakanuk	8	3	3.3	0.6	40	5	4.0	1.2	63	17	6.1	0.6	11	10	5.7	0.1	0	0	-	-	122	35	638	126
Emmonak	34	5	3.8	0.8	55	13	3.6	0.5	55	24	4.7	0.2	11	10	4.3	0.1	1	1	10.0	0.0	156	53	651	90
Kotlik	20	3	3.0	1.0	22	3	5.0	0.5	43	13	4.6	0.6	14	13	5.5	0.1	4	4	5.2	0.0	103	36	467	69
District 1	**204**	**37**	**4.5**	**0.3**	**134**	**32**	**4.0**	**0.4**	**227**	**80**	**5.4**	**0.3**	**68**	**62**	**5.6**	**0.0**	**8**	**8**	**5.6**	**0.0**	**641**	**219**	**3,098**	**239**
Mountain Village	27	3	4.6	0.6	44	4	6.0	1.6	65	18	5.6	0.5	18	14	5.3	0.4	1	1	4.0	0.0	155	40	859	157
Pitkas Point	7	5	3.8	0.5	5	4	3.2	0.4	8	8	4.6	0.0	7	7	6.1	0.0	0	0	-	-	27	24	123	8
St. Mary's	25	3	4.3	1.3	20	5	2.2	0.4	37	10	5.7	0.6	22	21	5.4	0.1	4	4	4.7	0.0	108	43	503	85
Pilot Station	8	4	2.7	0.5	36	10	3.3	0.5	47	23	4.8	0.3	4	3	4.6	0.1	1	0	4.3	0.4	96	40	393	52
Marshall	5	5	4.8	0.0	10	4	2.5	0.9	48	12	4.8	0.5	7	7	4.4	0.0	1	1	3.0	0.0	71	29	315	55
District 2	**72**	**20**	**4.3**	**0.5**	**115**	**27**	**4.1**	**0.6**	**205**	**71**	**5.3**	**0.2**	**58**	**52**	**5.3**	**0.1**	**7**	**6**	**4.3**	**0.0**	**457**	**176**	**2,192**	**194**
Russian Mission	7	2	3.0	0.8	17	5	7.4	0.9	27	8	5.7	0.9	7	7	5.4	0.0	1	0	5.5	0.5	59	22	346	58
Holy Cross	1	4	2.0	0.6	14	4	4.2	0.7	26	10	3.9	0.5	9	9	3.5	0.0	2	2	5.5	0.0	82	29	266	52
District 3	**8**	**6**	**2.2**	**0.5**	**31**	**9**	**6.0**	**0.5**	**53**	**18**	**4.8**	**0.5**	**16**	**16**	**4.4**	**0.0**	**3**	**2**	**5.5**	**0.1**	**141**	**51**	**611**	**78**
Anvik	2	1	1.0	0.2	15	4	2.0	0.6	14	5	4.4	0.7	5	5	3.2	0.0	3	3	3.0	0.0	39	18	119	27
Grayling	4	1	2.0	0.2	19	5	2.6	0.8	7	4	4.7	0.8	20	20	4.1	0.0	4	4	3.7	0.0	54	34	189	35
Kaltag	6	4	3.7	0.1	12	2	3.0	0.9	20	6	5.1	0.3	13	12	4.6	0.1	2	2	5.0	0.0	53	26	232	26
Nulato	27	4	3.5	0.7	33	4	2.7	0.4	20	6	3.8	0.5	14	14	5.1	0.0	1	1	5.0	0.0	95	29	339	56
Koyukuk	6	4	2.7	0.4	15	4	4.0	1.0	16	5	3.2	0.3	4	4	3.5	0.0	2	2	6.0	0.0	43	19	154	32
Galena	44	8	2.3	0.5	61	6	1.6	0.3	52	13	4.0	0.4	16	15	3.1	0.1	3	3	4.0	0.0	176	45	476	76
Ruby	21	3	2.0	0.9	33	4	2.5	1.1	17	4	4.0	1.2	11	9	3.1	0.3	5	5	2.6	0.0	87	25	240	92
Shageluk	7	5	3.4	0.4	11	4	2.2	0.3	9	5	1.8	0.3	10	10	3.8	0.0	3	3	4.3	0.0	40	27	116	12
Huslia	15	3	1.0	0.0	28	5	3.4	0.8	12	5	2.0	0.5	11	11	4.7	0.0	5	5	3.8	0.0	71	29	205	48
Hughes	2	2	1.0	0.0	4	4	3.0	0.0	7	7	2.5	0.0	6	6	2.5	0.0	0	0	-	-	19	19	47	0
Allakaket	5	5	2.4	0.0	13	5	1.4	0.3	12	4	3.5	1.0	11	11	3.7	0.0	2	2	4.5	0.0	43	27	122	26
Alatna	0	0	-	-	5	5	2.2	0.0	2	2	1.5	0.0	4	3	2.6	0.6	0	0	-	-	11	10	25	4
Bettles	7	5	1.4	0.1	20	19	1.8	0.0	6	6	3.5	0.0	0	0	-	-	0	0	-	-	33	30	68	3
District 4	**146**	**45**	**2.4**	**0.2**	**269**	**71**	**2.4**	**0.2**	**194**	**72**	**3.7**	**0.2**	**125**	**120**	**3.9**	**0.0**	**30**	**30**	**3.9**	**0.0**	**764**	**338**	**2,331**	**156**
Tanana	26	2	3.0	0.0	55	5	1.8	0.3	19	4	2.5	0.5	12	7	2.8	0.3	22	19	3.0	0.1	134	37	325	45
Rampart	0	0	-	-	10	8	2.3	0.2	3	2	2.0	0.5	8	7	2.1	0.1	6	6	4.6	0.0	27	23	75	5
Stevens Village	2	1	3.0	0.3	16	12	2.1	0.1	6	6	1.5	0.0	5	5	4.0	0.0	4	2	1.0	0.0	33	26	74	5
Birch Creek	3	2	4.0	0.5	10	4	1.7	0.3	6	4	4.0	0.2	0	0	-	-	0	0	-	-	19	10	54	8
Beaver	0	0	-	-	15	9	3.6	0.4	12	8	3.1	0.3	5	5	2.0	0.0	1	0	3.3	0.3	33	22	106	16
Fort Yukon	71	7	2.0	0.5	89	6	3.0	0.6	38	6	2.3	0.4	23	16	3.5	0.3	7	7	3.7	0.0	228	42	606	142
Venetie	31	3	4.3	0.3	22	4	3.0	1.1	7	3	4.0	0.4	9	6	4.6	0.2	1	0	3.3	0.3	70	16	274	52
Chalkyitsik	5	2	1.5	0.3	18	9	2.1	0.3	7	4	2.7	0.4	4	4	4.7	0.0	0	0	-	-	34	19	84	15
District 5	**138**	**17**	**2.8**	**0.2**	**235**	**57**	**2.6**	**0.2**	**98**	**37**	**2.7**	**0.2**	**66**	**50**	**3.4**	**0.1**	**41**	**34**	**3.2**	**0.0**	**578**	**195**	**1,596**	**160**
Survey Totals	**598**	**125**	**3.4**	**0.1**	**784**	**196**	**3.1**	**0.1**	**777**	**278**	**4.6**	**0.1**	**33**	**300**	**4.4**	**0.0**	**89**	**80**	**3.8**	**0.0**	**2,581**	**979**	**9,828**	**389**

Table 8. Subsistence salmon harvest estimates and corresponding confidence intervals for Yukon Area surveyed villages; households contacted indicates the number of households with complete harvest information used in estimating the salmon harvest, 1993.

Community	Catch Strata Combined		Chinook Salmon		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon	
	Total Households	Households Contacted a	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)
Hooper Bay	140	42	230	110	16,106	5,652	113	76	0	0
Scammon Bay	90	26	1,199	734	4,692	1,851	7	11	40	22
Sheldon's Point	30	27	561	72	2,362	371	158	76	78	31
Alakanuk	122	35	2,562	1,209	8,935	3,844	182	223	138	137
Emmonak	156	52	3,088	2,749	12,722	6,331	143	74	16	12
Kotlik	103	36	2,613	414	5,856	1,523	3,595	4,015	901	808
DISTRICT 1	*641*	*218*	*10,253*	*3,122*	*50,673*	*9,628*	*4,198*	*4,024*	*1,173*	*821*
Mountain Village	155	40	3,217	1,266	10,505	3,432	1,113	784	447	231
Pitkas Point	27	24	1,001	45	1,481	176	268	0	349	0
St. Mary's	108	43	2,042	373	5,925	1,222	440	63	102	50
Pilot Station	96	40	2,190	699	3,543	1,967	365	298	255	287
Marshall	71	29	2,592	1,198	1,745	531	256	0	320	407
DISTRICT 2	*457*	*176*	*11,042*	*1,915*	*23,199*	*4,178*	*2,442*	*842*	*1,473*	*552*
Russian Mission	59	22	3,273	1,599	1,838	796	172	218	152	72
Holy Cross	82	29	3,191	1,255	1,517	724	1,066	510	88	99
DISTRICT 3	*141*	*51*	*6,464*	*2,033*	*3,355*	*1,076*	*1,238*	*554*	*240*	*123*
Anvik	39	18	663	426	1,735	149	420	440	115	0
Grayling	54	34	1,045	487	1,137	479	2,083	964	164	86
Kaltag	53	26	1,260	468	1,116	907	704	211	334	264
Nulato	95	29	1,660	691	15	0	571	355	37	27
Koyukuk	43	19	853	436	230	15	2,052	138	70	0
Galena	176	44	1,732	620	2,477	695	3,255	537	124	74
Ruby	87	25	3,263	2,806	1,459	509	1,085	555	308	0
Shageluk	40	26	128	41	4,183	876	211	86	39	17
Huslia	71	29	232	9	8,343	696	258	0	9	0
Hughes	19	19	88	0	827	0	169	0	3	0
Allakaket	43	27	135	24	2,651	950	233	0	3	0
Alatna	11	10	4	3	52	19	2	0	0	0
Bettles	33	30	1	0	34	0	0	0	0	0
DISTRICT 4	*764*	*336*	*11,064*	*3,093*	*24,259*	*1,994*	*11,043*	*1,385*	*1,206*	*290*
Tanana	134	36	3,362	826	4,245	1,154	23,103	3,722	5,576	1,890
Rampart	27	23	1,956	226	1,489	510	3,272	78	38	5
Stevens Village	33	26	1,754	393	653	903	862	1,159	0	0
Birch Creek	19	10	0	0	0	0	0	0	0	0
Beaver	33	21	1,557	605	134	69	692	284	135	115
Fort Yukon	228	42	6,361	5,706	3,830	7,019	2,380	3,419	5	4
Venetie	70	16	2,716	4,110	129	69	7,881	8,148	135	115
Chalkyitsik	34	19	0	0	0	0	475	224	0	0
DISTRICT 5	*578*	*193*	*17,706*	*7,121*	*10,480*	*7,189*	*38,665*	*9,665*	*5,889*	*1,897*
Survey Totals	2,581	974	56,529	8,822	111,966	12,922	57,586	10,609	9,981	2,162

a Only households with complete harvest information were used in estimating the salmon harvest.

Table 9. Surveyed villages estimated Yukon Area chinook salmon subsistence catch by fishing location, 1993.

Villages	Ocean	Y-1	Y-2	Y-3	Y-4A	Y-4B	Y-4C	Y-5A	Y-5B	Y-5C	Y-5D	Innoko	Koyukuk	Porcupine	Chandalar	Black River (Porcupine)	Total by Community
Hooper Bay	227	3															230
Scammon Bay	116	1,083															1,199
Sheldon's Point	0	561															561
Alakanuk	0	2,562															2,562
Emmonak	0	3,088															3,088
Kotlik	0	2,613															2,613
DISTRICT 1	*343*	*9,910*															*10,253*
Mountain Village		212	3,005														3,217
Pitkas Point		0	1,001														1,001
St. Mary's		113	1,929														2,042
Pilot Station		0	2,190														2,190
Marshall		0	2,592														2,592
DISTRICT 2		*325*	*10,717*														*11,042*
Russian Mission			145	3,128													3,273
Holy Cross			280	2,911													3,191
DISTRICT 3			*425*	*6,039*													*6,464*
Anvik					663	0	0		0			0	0				663
Grayling					1,045	0	0		0			0	0				1,045
Kaltag					1,260	0	0		0			0	0				1,260
Nulato					1,660	0	0		0			0	0				1,660
Koyukuk					281	300	0		272			0	0				853
Galena					473	846	413		0			0	0				1,732
Ruby					0	348	2,915		0			0	0				3,263
Shageluk					9	0	0		0			119	0				128
Huslia					0	0	0		0			0	232				232
Hughes					0	0	0		0			0	88				88
Allakaket					0	0	0		0			0	135				135
Alatna					0	0	0		0			0	4				4
Bettles					0	0	0		0			0	1				1
DISTRICT 4					*5,391*	*1,494*	*3,328*		*272*			*119*	*460*				*11,064*
Tanana								383	2,979	0	0			0	0	0	3,362
Rampart								0	91	1,865	0			0	0	0	1,956
Stevens Village								0	0	469	1,285			0	0	0	1,754
Birch Creek								0	0	0	0			0	0	0	0
Beaver								0	0	0	1,557			0	0	0	1,557
Fort Yukon								0	0	0	6,285			76	0	0	6,361
Venetie								0	0	0	2,543			0	173	0	2,716
Chalkyitsik								0	0	0	0			0	0	0	0
DISTRICT 5								*383*	*3,070*	*2,334*	*11,670*			*76*	*173*	*0*	*17,706*
Survey Totals	343	10,235	11,142	6,039	5,391	1,494	3,328	383	3,342	2,334	11,670	119	460	76	173	0	56,529

Table 10. Surveyed villages estimated Yukon Area summer chum salmon subsistence catch by fishing location, 1993.

Villages	Ocean	Y-1	Y-2	Y-3	Y-4A	Y-4B	Y-4C	Y-5A	Y-5B	Y-5C	Y-5D	Innoko	Koyukuk	Porcupine	Chandalar	Black River (Porcupine)	Total by Community
Hooper Bay	14,633	1,473															16,106
Scammon Bay	698	3,994															4,692
Sheldon's Point	0	2,362															2,362
Alakanuk	0	8,935															8,935
Emmonak	0	12,722															12,722
Kotlik	0	5,856															5,856
DISTRICT 1	*15,331*	*35,342*															*50,673*
Mountain Village		2,110	8,395														10,505
Pitkas Point		0	1,481														1,481
St. Mary's		505	5,420														5,925
Pilot Station		0	3,543														3,543
Marshall		0	1,745														1,745
DISTRICT 2		*2,615*	*20,584*														*23,199*
Russian Mission			186	1,652													1,838
Holy Cross			10	1,507													1,517
DISTRICT 3			*196*	*3,159*													*3,355*
Anvik					1,735	0	0					0	0				1,735
Grayling					1,137	0	0					0	0				1,137
Kaltag					1,116	0	0					0	0				1,116
Nulato					15	0	0					0	0				15
Koyukuk					230	0	0					0	0				230
Galena					130	2,153	194					0	0				2,477
Ruby					0	611	848					0	0				1,459
Shageluk					0	0	0					4,183	0				4,183
Huslia					0	0	0					0	8,343				8,343
Hughes					0	0	0					0	827				827
Allakaket					0	0	0					0	2,651				2,651
Alatna					0	0	0					0	52				52
Bettles					0	0	0					0	34				34
DISTRICT 4					*4,363*	*2,764*	*1,042*					*4,183*	*11,907*				*24,259*
Tanana								920	3,325	0	0			0	0	0	4,245
Rampart								0	61	1,428	0			0	0	0	1,489
Stevens Village								0	0	653	0			0	0	0	653
Birch Creek								0	0	0	0			0	0	0	0
Beaver								0	0	0	134			0	0	0	134
Fort Yukon								0	0	0	3,818			12	0	0	3,830
Venetie								0	0	0	0			0	129	0	129
Chalkyitsik								0	0	0	0			0	0	0	0
DISTRICT 5								*920*	*3,386*	*2,081*	*3,952*			*12*	*129*	*0*	*10,480*
Survey Totals	15,331	37,957	20,780	3,159	4,363	2,764	1,042	920	3,386	2,081	3,952	4,183	11,907	12	129	0	111,966

Table 11. Surveyed villages estimated Yukon Area fall chum salmon subsistence catch by fishing location, 1993.

Villages	Ocean	Y-1	Y-2	Y-3	Y-4A	Y-4B	Y-4C	Y-5A	Y-5B	Y-5C	Y-5D	Innoko	Koyukuk	Porcupine	Chandalar	Black River (Porcupine)	Total by Community
Hooper Bay	113	0															113
Scammon Bay	0	7															7
Sheldon's Point	0	158															158
Alakanuk	0	182															182
Emmonak	0	143															143
Kotlik	0	3,595															3,595
DISTRICT 1	*113*	*4,085*															*4,198*
Mountain Village		0	1,113														1,113
Pitkas Point		0	268														268
St. Mary's		276	164														440
Pilot Station		0	365														365
Marshall		0	256														256
DISTRICT 2		*276*	*2,166*														*2,442*
Russian Mission			51	121													172
Holy Cross			0	1,066													1,066
DISTRICT 3			*51*	*1,187*													*1,238*
Anvik				0	420	0	0					0	0				420
Grayling				0	2,083	0	0					0	0				2,083
Kaltag				0	704	0	0					0	0				704
Nulato				0	571	0	0					0	0				571
Koyukuk				0	552	1,500	0					0	0				2,052
Galena				0	157	2,040	1,058					0	0				3,255
Ruby				0	0	440	645					0	0				1,085
Shageluk				100	0	0	0					111	0				211
Huslia				0	0	0	0					0	258				258
Hughes				0	0	0	0					0	169				169
Allakaket				0	0	0	0					0	233				233
Alatna				0	0	0	0					0	2				2
Bettles				0	0	0	0					0	0				0
DISTRICT 4				*100*	*4,487*	*3,980*	*1,703*					*111*	*662*				*11,043*
Tanana								3,427	19,676	0	0			0	0	0	23,103
Rampart								0	34	3,238	0			0	0	0	3,272
Stevens Village								0	0	834	28			0	0	0	862
Birch Creek								0	0	0	0			0	0	0	0
Beaver								0	0	0	692			0	0	0	692
Fort Yukon								0	0	0	276			2,104	0	0	2,380
Venetie								0	0	0	0			0	7,881	0	7,881
Chalkyitsik								0	0	0	0			0	0	475	475
DISTRICT 5								*3,427*	*19,710*	*4,072*	*996*			*2,104*	*7,881*	*475*	*38,665*
Survey Totals	113	4,361	2,217	1,287	4,487	3,980	1,703	3,427	19,710	4,072	996	111	662	2,104	7,881	475	57,586

Table 12. Surveyed villages estimated Yukon Area coho salmon subsistence catch by fishing location, 1993.

Villages	Ocean	Y-1	Y-2	Y-3	Y-4A	Y-4B	Y-4C	Y-5A	Y-5B	Y-5C	Y-5D	Innoko	Koyukuk	Porcupine	Chandalar	Black River (Porcupine)	Total by Community
Hooper Bay	0	0															0
Scammon Bay	0	40															40
Sheldon's Point	0	78															78
Alakanuk	0	138															138
Emmonak	0	16															16
Kotlik	0	901															901
DISTRICT 1	*0*	*1,173*															*1,173*
Mountain Village		0	447														447
Pitkas Point		0	349														349
St. Mary's		0	102														102
Pilot Station		0	255														255
Marshall		0	320														320
DISTRICT 2		*0*	*1,473*														*1,473*
Russian Mission			0	152													152
Holy Cross			0	88													88
DISTRICT 3			*0*	*240*													*240*
Anvik					115	0	0					0	0				115
Grayling					164	0	0					0	0				164
Kaltag					334	0	0					0	0				334
Nulato					37	0	0					0	0				37
Koyukuk					60	10	0					0	0				70
Galena					32	11	81					0	0				124
Ruby					0	0	308					0	0				308
Shageluk					0	0	0					39	0				39
Huslia					0	0	0					0	9				9
Hughes					0	0	0					0	3				3
Allakaket					0	0	0					0	3				3
Alatna					0	0	0					0	0				0
Bettles					0	0	0					0	0				0
DISTRICT 4					*742*	*21*	*389*					*39*	*15*				*1,206*
Tanana								1,393	4,183	0	0			0	0	0	5,576
Rampart								0	0	38	0			0	0	0	38
Stevens Village								0	0	0	0			0	0	0	0
Birch Creek								0	0	0	0			0	0	0	0
Beaver								0	0	0	135			0	0	0	135
Fort Yukon								0	0	0	0			5	0	0	5
Venetie								0	0	0	0			0	135	0	135
Chalkyitsik								0	0	0	0			0	0	0	0
DISTRICT 5								*1,393*	*4,183*	*38*	*135*			*5*	*135*	*0*	*5,889*
Survey Totals	0	1,173	1,473	240	742	21	389	1,393	4,183	38	135	39	15	5	135	0	9,981

Table 13. Subsistence harvest of miscellaneous fish species by surveyed households, Yukon Area villages, 1993. a

	Estimated Subsistence Harvest with Corresponding Confidence Intervals								Reported Numbers of Miscellaneous Fish Species, Have Not Been Expanded						
	Catch Strata Combined		Pike		Whitefish		Sheefish		Burbot	Blackfish	Grayling	Sucker	Tomcod	Lamprey	Arctic Char
Community	Total Households	Households Contacted	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Total	Total	Total	Total	Total	Total	Total
Hooper Bay	140	42	0	0	1,593	865	2	1	0	2,000	0	0	1,899	0	0
Scammon Bay	90	26	161	119	1,731	888	106	75	0	0	0	0	70	0	0
Sheldon's Point	30	27	62	38	1,155	112	706	164	31	0	0	0	100	0	0
Alakanuk	122	35	17	17	975	596	194	110	1	0	0	0	0	0	0
Emmonak	156	53	108	151	4,560	3,792	954	778	0	0	0	0	0	0	0
Kotlik	103	36	956	323	3,760	1,407	3,381	1,248	26	6,810	0	0	0	2	0
DISTRICT 1	*641*	*219*	*1,304*	*378*	*13,774*	*4,274*	*5,343*	*1,486*	*58*	*8,810*	*0*	*0*	*2,069*	*2*	*0*
Mountain Village	155	40	2,476	2,589	2,455	2,527	1,037	739	50	0	0	0	0	0	0
Pitkas Point	27	24	2,258	1,916	493	104	78	7	20	0	30	0	0	0	0
St. Mary's	108	43	498	256	1,810	272	440	147	0	0	0	0	0	0	0
Pilot Station	96	40	81	56	1,250	908	337	162	0	0	0	0	0	0	0
Marshall	71	29	63	67	1,300	1,334	167	106	0	0	0	0	0	0	0
DISTRICT 2	*457*	*176*	*5,376*	*3,232*	*7,308*	*3,013*	*2,059*	*778*	*70*	*0*	*30*	*0*	*0*	*0*	*0*
Russian Mission	59	22	118	111	128	130	188	219	1	0	0	0	0	0	0
Holy Cross	82	29	71	70	2,385	2,423	267	358	0	0	0	0	0	0	0
DISTRICT 3	*141*	*51*	*189*	*132*	*2,513*	*2,427*	*455*	*420*	*1*	*0*	*0*	*0*	*0*	*0*	*0*
Anvik	39	18	309	132	814	326	282	326	0	0	0	0	0	0	0
Grayling	54	34	101	3	1,297	8	105	0	20	0	0	0	0	0	0
Kaltag	53	26	13	7	820	122	35	11	10	0	0	0	0	0	0
Nulato	95	29	86	0	387	109	42	5	0	0	8	0	0	0	2
Koyukuk	43	19	413	10	2,700	0	126	26	22	0	0	12	0	0	0
Galena	176	45	62	30	3,536	756	292	169	25	0	0	0	0	0	0
Ruby	87	25	6	5	2,497	100	82	50	1	0	0	0	0	0	0
Shageluk	40	27	791	235	2,474	434	316	97	0	0	0	0	0	0	0
Huslia	71	29	1,032	198	1,096	99	302	19	7	0	0	0	0	0	0
Hughes	19	19	24	0	321	0	35	0	0	0	0	0	0	0	0
Allakaket	43	27	285	0	1,097	24	391	45	0	0	0	0	0	0	0
Alatna	11	10	21	0	118	13	28	0	0	0	0	0	0	0	0
Bettles	33	30	1	0	0	0	0	0	0	0	34	0	0	0	0
DISTRICT 4	*764*	*338*	*3,144*	*337*	*17,157*	*956*	*2,036*	*388*	*85*	*0*	*42*	*12*	*0*	*0*	*2*
Tanana	134	36	123	61	24,315	5,224	1,074	310	55	0	0	15	0	0	0
Rampart	27	23	5	3	1,196	518	236	16	6	0	30	0	0	0	0
Stevens Village	33	26	0	8	0	0	0	0	0	0	0	0	0	0	0
Birch Creek	19	10	0	0	30	33	0	0	0	0	0	0	0	0	0
Beaver	33	22	77	51	659	345	60	24	1	0	0	0	0	0	0
Fort Yukon	228	42	1,359	1,146	2,895	1,838	745	1,140	40	0	0	40	0	0	0
Venetie	70	16	4	3	632	345	31	17	0	0	20	0	0	0	0
Chalkyitsik	34	19	206	143	0	0	0	0	0	0	0	0	0	0	0
DISTRICT 5	*578*	*194*	*1,774*	*1,158*	*29,727*	*5,584*	*2,146*	*1,182*	*102*	*0*	*50*	*55*	*0*	*0*	*0*
Survey Totals	2,581	978	11,787	3,474	70,479	8,083	12,039	2,130	316	8,810	122	67	2,069	2	2

a First year since 1987 surveyed households were asked about miscellaneous fish harvest information and these numbers are considered minimums.

Table 14. Estimated number of salmon used for subsistence purposes and corresponding confidence intervals for Yukon Area surveyed villages; households contacted indicates the number of households with complete subsistence use information used in estimating the number of salmon used for subsistence purposes, 1993. a

Community	Catch Strata Combined		Chinook Salmon		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon	
	Total Households	Households Contacted	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)
Hooper Bay	140	42	206	87	16,868	5,108	39	25	0	0
Scammon Bay	90	26	1,044	622	4,208	1,308	7	11	40	22
Sheldon's Point	30	27	559	64	2,383	319	169	67	78	30
Alakanuk	122	35	2,186	786	8,517	3,705	163	223	97	96
Emmonak	156	52	1,800	805	11,803	2,847	430	478	14	11
Kotlik	103	36	2,038	510	4,426	1,095	2,434	2,037	660	434
DISTRICT 1	*641*	*218*	*7,833*	*1,388*	*48,205*	*7,137*	*3,242*	*2,106*	*889*	*447*
Mountain Village	155	40	2,858	1,344	10,161	3,433	1,022	772	504	309
Pitkas Point	27	24	944	42	1,514	161	268	0	349	0
St. Mary's	108	43	1,926	534	5,304	823	348	63	83	29
Pilot Station	96	40	2,478	698	3,869	1,931	304	193	190	156
Marshall	71	29	2,019	1,073	2,312	1,278	206	0	40	0
DISTRICT 2	*457*	*176*	*10,225*	*1,932*	*23,160*	*4,226*	*2,148*	*799*	*1,166*	*347*
Russian Mission	59	22	3,284	1,582	1,824	787	183	209	44	72
Holy Cross	82	28	1,925	476	1,339	722	1,072	428	78	99
DISTRICT 3	*141*	*50*	*5,209*	*1,653*	*3,163*	*1,068*	*1,255*	*476*	*122*	*123*
Anvik	39	18	732	373	8,011	3,495	450	428	105	0
Grayling	54	34	877	198	10,973	3,137	2,038	366	186	44
Kaltag	53	25	1,068	213	6,418	2,120	578	144	284	266
Nulato	95	29	1,297	357	2,923	2,048	432	312	43	27
Koyukuk	43	18	727	444	610	25	821	184	70	0
Galena	176	44	1,791	407	6,965	1,572	2,929	740	116	48
Ruby	87	25	2,710	2,129	1,671	281	2,461	686	320	10
Shageluk	40	26	201	66	3,877	843	122	61	22	9
Huslia	71	29	137	24	8,347	150	233	0	9	0
Hughes	19	19	76	0	912	0	166	0	3	0
Allakaket	43	27	113	31	2,288	950	138	15	3	0
Alatna	11	10	6	3	55	17	2	0	0	0
Bettles	33	30	25	4	40	0	0	0	0	0
DISTRICT 4	*764*	*334*	*9,760*	*2,292*	*53,090*	*5,911*	*10,370*	*1,222*	*1,161*	*276*
Tanana	134	36	3,805	868	4,377	1,169	25,422	3,729	5,490	1,880
Rampart	27	23	1,898	232	1,484	510	3,623	199	38	5
Stevens Village	33	26	1,825	385	653	903	1,046	1,166	0	0
Birch Creek	19	10	0	0	0	0	0	0	0	0
Beaver	33	21	944	319	134	69	2,302	751	135	115
Fort Yukon	228	42	4,758	4,191	1,896	2,854	2,393	2,153	4	4
Venetie	70	16	735	683	130	69	6,445	7,793	135	115
Chalkyitsik	34	19	17	16	0	0	2,235	490	0	0
DISTRICT 5	*578*	*193*	*13,982*	*4,370*	*8,674*	*3,255*	*43,466*	*9,027*	*5,802*	*1,887*
Survey Totals	2,581	971	47,009	5,722	136,292	10,747	60,481	9,396	9,140	1,994

a Includes salmon retained from commercial catches for subsistence use, see Table 14.

Table 15. Estimated number of salmon retained from commercial catches for subsistence use and corresponding confidence intervals for Yukon Area surveyed villages; households contacted indicates the number of households with complete commercial retention information used in estimating the number of salmon retained from commercial catches, 1993.

Community	Catch Strata Combined		Chinook Salmon		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon	
	Total Households	Households Contacted	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)
Hooper Bay	140	42	0	0	0	0				
Scammon Bay	90	26	0	0	46	61				
Sheldon's Point	30	27	1	0	5	3	There was no fall season commercial fishing.			
Alakanuk	122	35	0	0	13	20				
Emmonak	156	52	0	0	11	14				
Kotlik	103	36	14	16	224	139				
DISTRICT 1	*641*	*218*	*15*	*16*	*299*	*154*				
Mountain Village	155	40	0	0	84	96				
Pitkas Point	27	24	0	0	0	0				
St. Mary's	108	43	3	1	4	1				
Pilot Station	96	40	0	0	2	2				
Marshall	71	29	0	0	30	0				
DISTRICT 2	*457*	*176*	*3*	*1*	*120*	*96*				
Russian Mission	59	22	0	0	0	0				
Holy Cross	82	29	0	0	0	0				
DISTRICT 3	*141*	*51*	*0*	*0*	*0*	*0*				
Anvik	39	18	10	0	9,076	4,155				
Grayling	54	34	2	0	7,138	2,245				
Kaltag	53	26	43	28	5,764	1,780				
Nulato	95	29	0	0	2,231	0				
Koyukuk	43	19	50	0	1,000	0				
Galena	176	45	674	1,018	6,536	1,028				
Ruby	87	25	199	127	404	204				
Shageluk	40	27	0	0	0	0				
Huslia	71	29	0	0	0	0				
Hughes	19	19	0	0	0	0				
Allakaket	43	27	0	0	0	0				
Alatna	11	10	0	0	0	0				
Bettles	33	30	0	0	0	0				
DISTRICT 4	*764*	*338*	*978*	*1,026*	*32,149*	*5,155*				
Tanana	134	37	552	187	12	8				
Rampart	27	23	41	11	3	2				
Stevens Village	33	26	0	0	0	0				
Birch Creek	19	10	0	0	0	0				
Beaver	33	22	15	13	0	0				
Fort Yukon	228	42	72	77	144	155				
Venetie	70	16	15	13	0	0				
Chalkyitsik	34	19	0	0	0	0				
DISTRICT 5	*578*	*195*	*695*	*204*	*159*	*155*				
Survey Totals	2,581	978	1,691	1,047	32,727	5,161	0	0	0	0

Table 16. Estimated households with dogs, numbers of dogs, salmon fed to dogs and corresponding confidence intervals for Yukon Area surveyed villages, 1993.

Community	Catch Strata Combined		Number of Households with Dogs		Number of Dogs		Summer Chum Salmon Fed to Dogs				Fall Chum Salmon Fed to Dogs		Coho Salmon Fed to Dogs	
							Subsistence		Commercial					
	Total Households	Households Contacted	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)
Hooper Bay	140	42	104	21	253	74	0	0	0	0	0	0	0	0
Scammon Bay	90	26	46	19	138	53	0	0	0	0	0	0	0	0
Sheldon's Point	30	27	20	1	38	2	0	0	0	0	0	0	0	0
Alakanuk	122	35	86	21	148	43	0	0	0	0	0	0	0	0
Emmonak	156	53	102	15	248	109	179	120	0	0	0	0	0	0
Kotlik	103	36	72	19	256	122	475	438	0	0	70	23	22	8
DISTRICT 1	*641*	*219*	*430*	*44*	*1,081*	*193*	*654*	*454*	*0*	*0*	*70*	*23*	*22*	*8*
Mountain Village	155	40	95	31	262	115	116	106	0	0	0	0	0	0
Pitkas Point	27	24	14	1	79	10	145	0	0	0	260	0	318	0
St. Mary's	108	43	36	10	128	24	97	19	0	0	0	0	52	21
Pilot Station	96	40	43	10	106	25	34	49	0	0	0	0	0	0
Marshall	71	29	44	11	305	106	402	339	0	0	0	0	300	407
DISTRICT 2	*457*	*176*	*232*	*36*	*880*	*161*	*794*	*359*	*0*	*0*	*260*	*0*	*670*	*407*
Russian Mission	59	22	34	12	152	76	482	671	0	0	118	194	152	72
Holy Cross	82	29	56	16	190	151	939	682	0	0	116	212	0	0
DISTRICT 3	*141*	*51*	*90*	*20*	*342*	*169*	*1,421*	*957*	*0*	*0*	*234*	*287*	*152*	*72*
Anvik	39	18	34	6	221	60	1,640	1	7,627	3,711	50	0	80	0
Grayling	54	34	45	6	145	18	3,303	3,111	6,759	1,560	550	0	49	0
Kaltag	53	26	31	7	137	49	1,051	926	5,072	1,490	72	35	224	269
Nulato	95	29	59	20	172	45	9	0	3,254	2,049	40	0	13	0
Koyukuk	43	19	35	6	80	28	560	0	0	0	0	0	0	0
Galena	176	45	98	31	289	163	1,881	571	3,425	1,393	539	261	16	5
Ruby	87	25	39	15	193	67	611	0	81	0	2,654	825	197	0
Shageluk	40	27	28	5	105	37	1,250	0	0	0	500	0	10	0
Huslia	71	29	40	10	191	21	8,161	0	0	0	0	0	0	0
Hughes	19	19	11	0	46	0	666	0	0	0	0	0	0	0
Allakaket	43	27	19	6	106	29	691	0	0	0	0	0	0	0
Alatna	11	10	8	0	15	1	2	0	0	0	0	0	0	0
Bettles	33	30	16	2	50	5	0	0	0	0	0	0	0	0
DISTRICT 4	*764*	*338*	*463*	*44*	*1,750*	*208*	*19,825*	*3,296*	*26,218*	*4,957*	*4,405*	*866*	*589*	*269*
Tanana	134	37	97	27	664	201	2,983	893	0	0	24,150	3,662	4,905	1,901
Rampart	27	23	21	1	128	25	57	39	0	0	1,929	158	0	0
Stevens Village	33	26	18	2	61	25	652	903	0	0	747	846	0	0
Birch Creek	19	10	6	3	6	3	0	0	0	0	0	0	0	0
Beaver	33	22	23	3	66	10	73	50	0	0	2,019	410	121	115
Fort Yukon	228	42	119	41	476	263	1,655	2,848	0	0	1,991	1,982	0	0
Venetie	70	16	34	22	346	389	70	50	0	0	6,137	7,792	121	115
Chalkyitsik	34	19	30	4	93	22	0	0	0	0	1,915	475	0	0
DISTRICT 5	*578*	*195*	*348*	*55*	*1,840*	*513*	*5,490*	*3,120*	*0*	*0*	*38,888*	*8,899*	*5,147*	*1,908*
Survey Totals	2,581	979	1,563	93	5,893	631	28,184	4,675	26,218	4,957	43,857	8,946	6,580	1,971

Table 17. Summary of responses of surveyed individuals who said their household's subsistence salmon needs were not met in 1993, and answered the question "Why didn't you meet your salmon needs this year?".

Category	Response Summary	Number of Responses in this Category	Percent Responses in this Category
1	Mother Nature i.e. high water.	33	6%
2	Working in another occupation.	57	11%
3	No gear - boat, net, motor, gas.	64	12%
4	No helper to harvest or process fish.	11	2%
5	Busy doing other things.	25	5%
6	Medical reasons or elderly.	34	7%
7	Poor run of fish.	41	8%
8	Out of town.	6	1%
9	Will buy or be given more fish .	6	1%
10	Not enough fish caught.	22	4%
11	Miscellaneous reasons not in other categories.	40	9%
12	Still fishing.	6	1%
13	Department closed fishing.	131	25%
14	Didn't fish - normally don't use fish.	29	6%
15	Not enough available to share/barter.	9	2%
Totals [a]	976 households were surveyed.	514	100%

[a] This table was generated from the individual responses in Appendix A.12.

Table 18. Summary information from Subdistrict 4-A commercial fishermen concerning summer chum salmon caught during the 1993 commercial fishing season. [a]

INSEASON INFORMATION FROM 48 FISHERMEN

48 of the 53 fishermen reported killing 22,441 summer chum salmon on fish tickets inseason.

The department inseason estimate for those same 48 fishermen estimated 35,113 summer chum salmon killed, based on .9 pounds of roe per female and a sex ratio of .6.

POSTSEASON INTERVIEW INFORMATION FROM 48 FISHERMEN

Do you or crewmembers throw back live male summer chum salmon?

15 (31%) fishermen said yes.
33 (69%) fishermen said no.

Of the 15 fishermen who reported throwing back live male summer chum salmon, the method of return to the water was:

1 (7%) threw the fish back after they dropped into a box;
6 (40%) dropped males into the water via a chute from the wheel to the water;
3 (20%) released the fish from a livebox using a dipnet or bucket;
5 (33%) released fish from their set gillnets;

Of the 15 fishermen who reported throwing back live male summer chum salmon, during the two fishing periods (one 12-hour and one 9-hour, totaling 21 hours), how much of the time were males released?

11 released males all the time during 217 of 231 hours of fishing time.
2 released males 1/2 of the time during 42 of 42 hours of fishing time.
2 released males $<$ 1/4 of the time during 42 of 42 hours of fishing time.

During the postseason interview, 48 Subdistrict 4-A fishermen reported killing 31,916 summer chum salmon during the 1993 commercial fishing season--142% of the inseason fish ticket report and 91% of the department expanded inseason estimate.

Fishermen reported retaining 16,184 (51%) fish for their households subsistence use.
Fishermen reported giving away 10,257 (32%) fish to other households.
Fishermen reported selling/bartering 2,230 (8%) fish to other households.
Fishermen reported loss to spoilage/animals of 2,773 (9%) fish.

[a] This table was generated from the information contained in Appendix A.13.

Table 19. Summary of Yukon River tributary coho salmon spawning location information collected during the 1993 Yukon River subsistence salmon surveys.

Village	HHID#	Spawning or Dead?	Number Of Coho Observed	Date / Month	Year	River and Stream Names in Dictionary of Alaska Place Names	Latitude / Longitude or U.S.G.S Map Number	Coho Salmon Previously Identified in Anadromous Stream Catalog \a
Hooper Bay	210019	Spawning	20	Early August	Several	Kokechik River, 40 miles inland	61°41'N, 165°51'W	No
Scammon Bay	390009	Spawning	100	12 September	1993	"Klik River" (tributary to Ear River) Not in Dictionary of Alaska Place Names	Hooper Bay D-2 Not named on map.	No
Scammon Bay	390026	Dead	6	15 August	1993	"Swift Current" (flows from Askinuk Mts.) Not in Dictionary of Alaska Place Names	Hooper Bay D-2 Not named on map.	No
Scammon Bay	390077	Spawning	600	Unknown	Unknown	"Charapaq" (flows from Askinuk Mts.) Not in Dictionary of Alaska Place Names	Hooper Bay D-1 Not named on map.	No
Scammon Bay	390050	Spawning	500	10 August	1993	Tungpuk River (tributary to Kun River)	61°52'20"N, 165°17'30"W	No
Sheldon Point	410009	Spawning	5	2 September	1993	Kwemeluk Pass ("Sheldon Pt. River")	62°33'N, 165°01'W	Yes \b
Sheldon Point	410019	Spawning	1	12 October	1992	Nunamekrot (name for old village site)	Site not found on map.	No
Kotlik	260042	Spawning	1	After freeze-up	1992	Pastolik River	63°02'N, 163°20'W	Yes
Kotlik	260056	Spawning	20	Late August	1992	Pastolik River	63°02'N, 163°20'W	Yes
		Spawning	Hundreds	Early September	1992	Pikmiktalik River	60°45'45"N, 162°14'30"W	Yes
Kotlik	260073	Spawning	>1000	Late August	1990	Pastolik River	63°02'N, 163°20'W	Yes
		Spawning	>1000	Late August	1990	Pikmiktalik River	60°45'45"N, 162°14'30"W	Yes
		Spawning	>1000	September	1992	Andraefsky River	63°07'N, 161°46'W	Yes
Kotlik	260080	Spawning	Uncertain	Sept. to December	Unknown	Pastolik River	63°02'N, 163°20'W	Yes
Kotlik	260102	Spawning	50	End of August	1993	Pikmiktalik River	60°45'45"N, 162°14'30"W	Yes
Mountain Village	310033	Spawning	100	Mid-September	1992	Archuelinguk River \c	62°23'N, 163°14'W	Yes
Mountain Village	310022	Spawning & Dead	50-100	Mid-Aug. to early Sept.	Unknown	Archuelinguk River \c	62°23'N, 163°14'W	Yes
Mountain Village	310042	Spawning	Thousands	Moose hunting season	Unknown	Archuelinguk River \c	62°23'N, 163°14'W	Yes
Mountain Village	310052	Spawning	Lots	12 September	1993	Archuelinguk River \c	62°23'N, 163°14'W	Yes
Mountain Village	310102	Spawning	100	15 August	1993	Archuelinguk River \c	62°23'N, 163°14'W	Yes
Mountain Village	310113	Spawning	Lots	Unknown	1977	Andreafsky River	63°07'N, 161°46'W	Yes
Mountain Village	310195	Spawning	10	10 September	1993	North Fork Andreafsky River	63°07'N, 161°46'W	Yes

-Continued-

Table 19. (page 2 of 6)

Village	HHID#	Spawning or Dead?	Number Of Coho Observed	Date / Month	Year	River and Stream Names in Dictionary of Alaska Place Names	Latitude / Longitude or U.S.G.S Map Number	Coho Salmon Previously Identified in Anadromous Stream Catalog \a
Pitka's Point	350002	Spawning	50	15 August	1993	North Fork Andreafsky River	63°07'N, 161°46'W	Yes
		Spawning	50	15 August	1993	South Fork Andreafsky River	63°07'N, 161°46'W	Yes
Pitka's Point	350031	Spawning	50	Mid-August	1993	North Fork Andreafsky River	63°07'N, 161°46'W	Yes
Pitka's Point	350010	Spawning	1000	Late Aug. to late Sept.	Unknown	North & South Forks Andreafsky River	63°07'N, 161°46'W	Yes
Pitka's Point	350024	Spawning	Lots	End of August	1992	Andreafsky River	63°07'N, 161°46'W	Yes
Saint Mary's	420027	Spawning	6	11 September	1993	Andreafsky River	63°07'N, 161°46'W	Yes
Saint Mary's	420041	Spawning	Too many to count	29 July and later	Yearly	Andreafsky River	63°07'N, 161°46'W	Yes
Saint Mary's	420094	Spawning	300	1 September	1993	North Fork Andreafsky (65 miles up)	63°07'N, 161°46'W	Yes
Pilot Station	340003	Spawning	100	6 September	1993	Atchuelinguk River	63°02'N, 161°27'W	Yes
Pilot Station	340019	Spawning	400	15 September	1993	Atchuelinguk River	63°02'N, 161°27'W	Yes
Pilot Station	340021	Spawning	500	Moose hunting season	1992	Atchuelinguk River	63°02'N, 161°27'W	Yes
Pilot Station	340036	Spawning	Uncertain	15 September	1993	Atchuelinguk River	63°02'N, 161°27'W	Yes
Pilot Station	340035	Dead	500	15 September	1993	Atchuelinguk River (5 hour ride upriver)	63°02'N, 161°27'W	Yes
Marshall	290073	Spawning	30	6 September	1993	Wilson Creek	61°51'50"N, 162°03'20"W	No
		Dead	7	6 September	1993	Wilson Creek	61°51'50"N, 162°03'20"W	No
Marshall	290023	Spawning	30	15 September	1993	Wilson Creek	61°51'50"N, 162°03'20"W	No
Russian Mission	380010	Spawning	>2000	2 October	1993	Kako Creek	61°51'30"N, 161°19'50"W	Yes
Russian Mission	380042	Spawning	500	30 August	1991	Unnamed creek that flows from west into Yukon River at Circle Island.	Russian Mission D-7	No
Holy Cross	200005	Spawning	50-100	Mid-September	1992	Reindeer River	62°08'N, 159°27'W	Yes
		Spawning	>50	Mid-September	1992	Unnamed creek in Paimiut Hills, above Tabernacle Mtn.	Holy Cross A-3	No
		Spawning	20	10 September	1993	Unnamed creek above Gost Creek.	Holy Cross A-2	No
		Spawning	20	20 September	1993	Unnamed tributary to Koserefski River.	Holy Cross A-3	No
Holy Cross	200007	Spawning	20	Early September	1989	Reindeer River	62°08'N, 159°27'W	Yes
Holy Cross	200033	Spawning	Uncertain	Unknown	Unknown	Reindeer River	62°08'N, 159°27'W	Yes

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Table 19. (page 3 of 6)

Village	HHID#	Spawning or Dead?	Number Of Coho Observed	Date / Month	Year	River and Stream Names in Dictionary of Alaska Place Names	Latitude / Longitude or U.S.G.S Map Number	Coho Salmon Previously Identified in Anadromous Stream Catalog \a
Shageluk	400034	Spawning	100	September	Unknown	Innoko River	62°12'N, 159°43'W	Yes
Anvik	40004	Spawning	A lot	Late September	Unknown	Bear Creek (enters Yukon from west 1 mile above Eagle Island)	63°38'30"N, 159°24'05"W	No
		Spawning	A lot	Late Sept. & October	Unknown	Bonasilla River	62°32'N, 160°13'W	Yes
Anvik	40035	Spawning	5000	Late Aug. / early Sept.	Yearly	Swift River (tributary to Anvik River)	63°04'10"N, 160°43'00"W	Yes
		Spawning	6000	Late Aug. / early Sept.	Yearly	Otter Creek (tributary to Anvik River)	63°14'30"N, 160°41'50"W	No
		Spawning	Uncertain	Late Aug. / early Sept.	Yearly	Anvik River, above Yellow River.	62°55'N, 160°41'W	Yes
Grayling	180005	Spawning	1-5	Mid-September	Yearly	Bear Creek (1 mi. above Eagle Island)	63°38'30"N, 159°24'05"W	No
Grayling	180048	Spawning	Uncertain	Sept. & Oct. when water drops & gets clearer.	Yearly	Yukon River, below mouth of Grayling Cr.	62°54'N, 160°04'W	No
Grayling	180039	Spawning	200	September	1992	Grayling Creek, at mouth	62°54'N, 160°04'W	No
Grayling	180007	Spawning	2	10 September	1993	Grayling Creek	62°54'N, 160°04'W	No
Grayling	180012	Spawning	200	19 September	1993	Grayling Creek	62°54'N, 160°04'W	No
Grayling	180002	Spawning	300	Late Aug. through Oct.	Unknown	Grayling Creek	62°54'N, 160°04'W	No
Grayling	180016	Spawning	Uncertain	Late September	Yearly	Thompson Creek	63°06'N, 159°48'W	No
Grayling	180011	Spawning	12	Early September	1992	Thompson Creek	63°06'N, 159°48'W	No
Kaltag	240075	Spawning	Uncertain	Unknown	Unknown	Kaltag River	64°20'N, 158°43'W	No
Kaltag	240057	Spawning	Hundreds	End of September	Unknown	Kaltag River	64°20'N, 158°43'W	No
Kaltag	240026	Spawning	100	Late August	Yearly	Kaltag River	64°20'N, 158°43'W	No
Kaltag	240020	Spawning	Uncertain	Late August	Unknown	Kaltag River	64°20'N, 158°43'W	No
		Spawning	Uncertain	Late August	Unknown	Rodo River	64°17'N, 158°43'W	No
Kaltag	240015	Spawning	300	Mid-Sept. & October	1992	Kaltag River	64°20'N, 158°43'W	No
Kaltag	240010	Spawning	Hundreds	End of September	Unknown	Kaltag River	64°20'N, 158°43'W	No
Kaltag	240007	Spawning	100	Late September	Unknown	Kaltag River	64°20'N, 158°43'W	No
		Spawning	Uncertain	Unknown	Unknown	Stink Creek	63°59'N, 158°48'W	No
		Spawning	Uncertain	Unknown	Unknown	"Old River." Not found in Place Names.	Not found on map.	No
Nulato	330077	Spawning	Few	August to November	Unknown	Nulato River	64°42'N, 158°08'W	No

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Table 19. (page 4 of 6)

Village	HHID#	Spawning or Dead?	Number Of Coho Observed	Date / Month	Year	River and Stream Names in Dictionary of Alaska Place Names	Latitude / Longitude or U.S.G.S Map Number	Coho Salmon Previously Identified in Anadromous Stream Catalog \a
Nulato	330059	Spawning	100	October	Yearly	Nulato River	64°42'N, 158°08'W	No
Nulato	330053	Spawning	Few	Early October	Yearly	Nulato River	64°42'N, 158°08'W	No
Nulato	330025	Spawning	50	When ice was running	1991	Nulato River	64°42'N, 158°08'W	No
Koyukuk	270025	Spawning	20	September	1992	Nulato River	64°42'N, 158°08'W	No
		Spawning	20	September	1992	Kaltag River	64°20'N, 158°43'W	No
Koyukuk	270052	Spawning & Dead	40	Late August	1984	Gisasa River	65°16'N, 157°40'W	No
Huslia	230050	Spawning	Uncertain	Moose hunting season	1943	North Fork Huslia River	65°44'N, 156°32'W	No
Huslia	230047	Spawning	Few	After moose hunting	Unknown	Dakli River. Not in Alaska Place Names	Shungnak A-1	No
Huslia	230045	Spawning	Few	Moose hunting season	Unknown	Dakli River. Not in Alaska Place Names	Shungnak A-1	No
		Spawning	Few	Moose hunting season	Unknown	Huslia River	65°44'N, 156°32'W	No
Huslia	230037	Spawning	< 100	Middle	Unknown	North Fork Huslia River	65°44'N, 156°32'W	No
		Spawning	< 100	Late Fall	Unknown	Dakli River. Not in Alaska Place Names	Shungnak A-1	No
		Spawning	Uncertain	Unknown	Unknown	Henshaw Creek \d	66°33'N, 152°14'W	No
Huslia	230028	Spawning	50	End of September	1991	Huslia River "up by the mountains"	65°44'N, 156°32'W	No
Huslia	230069	Spawning	200	Moose hunting season	Yearly	Dakli River. Not in Alaska Place Names	Shungnak A-1	No
Hughes	220020	Spawning	Few	Early September	1988	Indian River	65°52'N, 154°24'W	No
Allakaket	30034	Spawning	> 1000	Uncertain	1950's	South Fork Koyukuk River, "60 miles above Allakaket."	64°55'N, 157°32'W	No
Allakaket	30039	Spawning	50	Moose hunting season	Unknown	Alatna River (20 miles up)	66°50'N, 151°43'W	No
		Spawning	Some	Moose hunting season	Unknown	South Fork Koyukuk River	64°55'N, 157°32'W	No
Galena	170069	Dead	1	Unknown	Unknown	Kala Creek \e	64°37'N, 156°45'W	No
Galena	170073	Spawning	1	Late September	1991	Kala Creek \e	64°37'N, 156°45'W	No
Galena	170218	Spawning	Few	October	Unknown	Hogatza River	66°00N, 155°24'W	No
		Spawning	Few	Late Sept. to early Oct.	Unknown	Illinois Creek, tributary to Little Mud R. Not found in Alaska Place Names Dict.	Nulato A-4 (Creek is named on map)	Yes
		Spawning	Few	Late Sept. to early Oct.	Unknown	California Creek, tributary to Little Mud R. Not found in Alaska Place Names Dict.	Nulato A-4 (Creek is named on map)	No

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Table 19. (page 5 of 6)

Village	HHID#	Spawning or Dead?	Number Of Coho Observed	Date / Month	Year	River and Stream Names in Dictionary of Alaska Place Names	Latitude / Longitude or U.S.G.S Map Number	Coho Salmon Previously Identified in Anadromous Stream Catalog \a
Ruby	370078	Migrating	Thousands	Late Fall	1940's	Melozitna River	64°46'N, 155°28'W	No
Ruby	370067	Spawning	Uncertain	Unknown	Unknown	Huslia River	65°44'N, 156°32'W	No
Ruby	370086	Dead	1	August & September	1993	Hot Springs Creek (trib. to Melozitna R.)	65°11'00"N, 154°54'45"W	No
Ruby	370085	Spawning	30	August	1993	Melozitna River (as far as Grayling Cr.)	64°46'N, 155°28'W	No
Tanana	440025	Spawning	Uncertain	Unknown	Long ago	Several creeks flowing into the Yukon River near the Rapids. (not specific)	65°20'30"N, 151°04'00"W (lat./long. of the Rapids)	No
Tanana	440135	Spawning	Few		Unknown	Tozitna River	65°08'15"N, 152°25'00"W	No
Beaver	50023	Spawning	Lots	Late October	Unknown	Yukon River, at Lower Mouth Birch Creek	66°27'N, 146°38'W	No \f
		Spawning	Lots	Late October	Unknown	Yukon River, at Chandalar River mouth	66°36'35"N, 146°00'20"W	No
Beaver	50004	Spawning	Dozens	Just before freeze-up	Unknown	Yukon River, in eddies in front Beaver	66°21'30"N, 147°23'30"W	No
		Spawning	'Thick in	Unknown	Unknown	Hodzana Slough	66°14'00"N, 147°54'40"W	Yes
		Spawning	there'	Unknown	Unknown	Whirlpool Slough	66°17'N, 147°40'W	Yes
Beaver	50001	Spawning	Uncertain	Mid-October	Unknown	Hodzana River	66°17'30"N, 147°46'30"W	Yes
		Spawning	Uncertain	Mid-October	Unknown	Beaver Creek "and other small creeks."	66°14'N, 147°32'W	Yes
Venetie	450013	Spawning	'Not too many'	October	Unknown	Chandalar River	66°36'35"N, 146°00'20"W	No
Fort Yukon	160203	Spawning & Dead	'Complete school'	20 November	1992	Kevinjik Creek (flows into the Salmon Fork Black River)	66°31'N, 142°05'W	No
Fort Yukon	160104	Spawning	Lots	Late Fall	Unknown	"Oriijek" Not found in Place Names Dict.	Not found on map.	No
Fort Yukon	160098	Dead	Dozen	September	Unknown	Salmon Fork Black River	66°33'N, 142°32'W	No
		Dead	Uncertain	September	Unknown	Sheenjek River	66°44'30"W, 144°34'30"W	Yes
Fort Yukon	160036	Spawning	Dozens	Oct. & Early November	Several	Sheenjek River	66°44'30"W, 144°34'30"W	Yes
		Spawning	Dozens	Oct. & Early November	Several	Salmon Trout River	67°10'N, 141°40'40"W	No
		Unknown	Uncertain	November	Yearly	Porcupine River, at Old Crow \g	Old Crow, Canada.	Yes \h
Fort Yukon	160018	Spawning	Hundreds	October & November	Yearly	Salmon Fork Black River	66°33'N, 142°32'W	No
		Spawning	Hundreds	October & November	Yearly	Kevinjik Creek (flows into the Salmon Fork Black River)	66°31'N, 142°05'W	No
Fort Yukon	160001	Spawning	Uncertain	October	Unknown	Sheenjek River	66°44'30"W, 144°34'30"W	Yes
		Spawning	Uncertain	October	Unknown	Coleen River	67°06'N, 142°48'W	No

-Continued-

Table 19. (page 6 of 6)

Village	HHID#	Spawning or Dead?	Number Of Coho Observed	Date / Month	Year	River and Stream Names in Dictionary of Alaska Place Names	Latitude / Longitude or U.S.G.S Map Number	Coho Salmon Previously Identified in Anadromous Stream Catalog \a
Fort Yukon	160059	Spawning	20-30	November	Unknown	Yukon River, 8 miles upriver in spring-fed open water spots.	Fort Yukon B-3/C-3	No
Fort Yukon	160165	Unknown	Thousands	EarlyAugust	Unknown	Hawk River (tributary to Huslia River)	66°09'N, 157°10'W	No
Chalkyitsik	90025	Spawning	Hundreds	October & November	1928	"Sheep Creek, tributary to Black River, up by the mountains." Not found in Dictionary of Alaska Place Names.	Not found on map.	No

\a Information from Anadromous Stream Catalog Atlas, updated 11/93.
\b Coho are not known to spawn in Kwemeluk Pass, but are known to be present and spawn in waters upstream.
\c Mountain Village residents also call this the "Clearwater" river.
\d Second-hand report.
\e Also known as "Kalakaket Creek."
\f Coho are not known to spawn in the Yukon River, but are known to be present and spawn in Birch Creek.
\g Reported that Old Crow residents catch coho under the ice in November.
\h Coho are known to be present in the Porcupine River as far as the Canada border.

Table 20. Summary of hatchery salmon provided to four Yukon River communities during September, 1993.

Community	Airlift activity and fish weight	Estimated number of fish *	Comments
Beaver	9/15 2,394 lbs. from Medvejie Creek 9/16 2,406 lbs. from Medvejie Creek 9/23 5,200 lbs. from Medvejie Creek total: 10,000 lbs.	1,180 chum 502 pink	Most went to two residents with dog teams; although several residents without dog teams received fish. Amount received ranged from 25 to 600 fish (2 to 30 boxes). Quality of fish considered poor upon arrival, useable for dogs or trapping bait only. Amount well below community need.
Chalkyitsik	9/17 1,302 lbs. from Medvejie Creek 9/19 1,600 lbs. from Medvejie Creek 9/23 5,100 lbs. from Medvejie Creek total: 8,002 lbs.	945 chum 401 pink	Fish fairly evenly distributed throughout community. Quality of fish considered poor. Some attempted to dry fish, but found fish shriveled up to almost nothing on the rack. Fish used for feeding dogs.
Ruby	9/15 8,668 lbs. from Sikusuilaq 9/23 6,500 lbs. from Medvejie Creek total: 15,168 lbs.	1,789 chum 326 pink	City office coordinated distribution. Dog mushers pleased with quality of fish for feeding dogs, but amount did not fill community needs.
Tanana	9/14 10,971 lbs. from Sikusuilaq 9/16 9,082 lbs. from Sikusuilaq 9/18 10,553 lbs. from Sikusuilaq 9/23 4,700 lbs. from Medvejie Creek total: 35,306 lbs.	4,164 chum 236 pink	Distribution coordinated by Village Public Safety Officer. First load to one resident, subsequent loads distributed among dog team owners; 130 to 460 fish per household. Chum packed 12 per box, pink packed 30 per box. Fish preserved by freezing outdoors in open air. Marginal nutritional quality for dogs. Gesture appreciated but quantity far below community need.
All communities	29,202 lbs. from Medvejie Creek 39,274 lbs. from Sikusuilaq total: 68,476 lbs.	8,078 chum 1,465 pink	

Notes:

* Estimates of the number of fish are based on:

1) 8.48 lb. average chum weight from Sikusuilaq Hatchery near Kotzebue,
2) 7.2 lb. average chum weight from Medvejie Creek Hatchery near Sitka,
3) 2.99 lb. average pink salmon weight from Medvejie Creek Hatchery,
4) and Medvejie Creek shipments containing 15% pink salmon by weight.

Estimated cost of deliveries to four communities was $36,784 (source: 9/21/93 Meacham memo).

Information summarized by the Alaska Department of Fish and Game, Division of Subsistence.

Table 21. Reported Yukon Area subsistence and personal use salmon catches taken under authority of a permit, listed by fishing location, 1993. a

Permit Fishing Area	Permit Type	Issued	Returned	Percent Returned	Fished b	Reported Harvest							
						Chinook	Summer Chum	Fall Chum	Coho	Whitefish	Sheefish	Burbot	Pike
Subsistence Use													
Yukon River near Haul Road Bridge	SY-#-93	49	47	96%	36	3,767	492	2,915	16	1,009	13	23	26
Yukon River near Circle and Eagle	SE-#-93	79	79	100%	49	1,910	118	2,419	95	680	3	1	39
Tanana River Fishing Subdistrict 6A c	SA-#-93	38	37	97%	21	331	784	2,613	1,315	216	8	21	54
Tanana River Fishing Subdistrict 6B	SB-#-93	99	89	90%	38	1,341	5,976	7,166	2,987	407	8	13	211
Tanana River Upstream of Subdistrict 6C	SU-#-93	10	10	100%	8	0	0	5	0	483	0	1	51
Kantishna River Fishing Subdistrict 6A	SK-#-93	4	4	100%	1	0	0	4	2	0	0	0	0
Tolovana River Pike	ST-#-93	31	22	71%	10	0	0	0	0	120	14	5	767
Subsistence Permit Subtotals		310	288	93%	163	7,349	7,370	15,122	4,415	2,915	46	64	1,148
Personal Use													
Tanana River Fishing Subdistrict 6C	PC-#-93	133	131	98%	79	426	674	163	0	33	3	2	1
Tanana River Whitefish	PU-#-93	4	4	100%	2	0	0	0	0	191	0	0	1
Personal Use Permit Subtotals		137	135	99%	81	426	674	163	0	224	3	2	2
Delta River Carcasses d	PD-#-93	0	0	100%	0	0	0	0	0	0	0	0	0
Permit Totals		447 e	423	95%	244	7,775	8,044	15,285	4,415	3,139	49	66	1,150

a Does not include salmon permit information returned after February 14, 1994 or pike permit information returned after April 1, 1994.

b The number of fishermen who fished based on returned permits.

c Includes 33 summer chum and 65 fall chum (that died in the live box) given away as part of the Departments Manley test fish wheel program.

d The department chose not to issue any carcass permits to reduce spawning habitat disturbances.

e Includes 6 households that fished in two different permit areas and includes 30 Minto households who were issued salmon permits.

Table 22. Reported Yukon Area subsistence and personal use salmon catches taken under authority of a permit, listed by community of residence, 1993. a

Community	Harvest by River	Permits Issued	Permits Returned	Percent Returned	Fished b	Reported Harvest Chinook	Summer Chum	Fall Chum	Coho	Whitefish	Sheefish	Burbot	Pike
Central	Yukon River	14	14	100%	8	210	2	0	0	0	1	0	0
Circle	Yukon River	19	19	100%	8	745	83	349	10	113	0	0	0
Delta Junction	Tanana River	4	4	100%	3	0	0	1	0	194	0	0	2
Delta Carcass c	Tanana River	0	0	100%	0	0	0	0	0	0	0	0	0
Eagle	Yukon River	35	35	100%	25	753	32	2,070	85	555	2	1	6
Fairbanks North	Yukon River	39	39		30	1,514	465	930	0	745	13	2	39
Star Borough d	Tanana River	153	151		87	699	771	219	0	67	3	2	6
	Subtotal	192	190	99%	117	2,213	1,236	1,149	0	812	16	4	45
Healy	Tanana River	5	5	100%	2	0	0	351	1,155	82	0	10	7
Manley e	Yukon River	1	1		1	116	17	0	0	26	0	1	0
	Tanana River	26	25		16	238	1,277	3,150	1,535	163	8	21	28
	Subtotal	27	26	96%	17	354	1,294	3,150	1,535	189	8	22	28
Minto	Yukon River	2	2		1	0	0	1,400	0	100	0	20	20
	Tanana River	40	33		11	468	367	301	300	202	0	0	227
	Tolovana River Pike	31	22		10	0	0	0	0	120	14	5	767
	Subtotal	73	57	78%	22	468	367	1,701	300	422	14	25	1,014
Nenana	Yukon River	1	1		1	154	1	0	0	0	0	0	0
	Tanana River	51	48		23	693	5,019	5,929	1,314	167	8	3	0
	Subtotal	52	49	94%	24	847	5,020	5,929	1,314	167	8	3	0
Stevens Village	Yukon River	12	11	92%	9	2,018	4	235	16	0	0	0	0
Tok	Yukon River	3	3		1	17	1	0	0	0	0	0	0
	Tanana River	4	4		4	0	0	0	0	277	0	1	0
	Subtotal	7	7	100%	5	17	1	0	0	277	0	1	0
	Yukon River	2	1		1	150	5	350	0	150	0	0	0
Other f	Tanana River	5	5		3	0	0	0	0	178	0	0	48
	Subtotal	7	6	86%	4	150	5	350	0	328	0	0	48
Permit Totals		447 g	423	95%	244	7,775	8,044	15,285	4,415	3,139	49	66	1,150

0

b The number of fishermen who fished based on returned permits.

c The department chose not to issue any carcass permits to reduce spawning habitat disturbances.

d Includes residents from the communities of Fairbanks, College, Ester, Ft. Wainwright, North Pole, Salcha, and Two Rivers.

e Includes 33 summer chum and 65 fall chum (that died in the live box) given away as part of the Departments Manley test fish wheel program.

f Includes residents from the communities of Anchorage, Dot Lake, Northway, Paxson, and Rampart.

g Includes 6 households that fished two different permit areas and includes 30 Minto households who were issued salmon permits.

Table 23. Yukon Area household and dog information reported by subsistence and personal use permits issued and returned, listed by community of residence, 1993. a

Community	Permits Issued	Permits Returned	Percent Returned	Fished b	Permit Issue Information: Number of People in Households that obtained a Permit	Permit Issue Information: Number of Household Fishermen	Permit Issue Information: Number of Dogs Reported by Permits Issued	Permit Issue Information: Number of Households that said they fed whole salmon to dogs	Permit Return Information: Number of Households that Reported Feeding Whole Salmon To Dogs	Permit Return Information: Number of Whole Salmon Fed or Put Up For Dog Food
Central	14	14	100%	8	31	24	27	4	0	0
Circle	19	19	100%	8	57	32	80	14	0	0
Delta Junction	4	4	100%	3	8	6	0	0	0	0
Eagle	35	35	100%	25	98	61	176	16	4	1,133
Fairbanks North Star Borough c	192	190	99%	117	636	322	1,073	19	2	4
Healy	5	5	100%	2	17	13	65	3	0	0
Manley d	27	26	96%	17	71	44	507	21	2	858
Minto	42	35	83%	12	164	69	247	22	0	0
Nenana	52	49	94%	24	149	81	698	33	2	685
Stevens Village	12	11	92%	9	34	20	26	4	0	0
Tok	7	7	100%	5	25	15	5	0	0	0
Other e	7	6	86%	4	17	11	10	1	0	0
Permit Totals	416 f	401	96%	234	1,307	698	2,914	137	10	2,680

a Does not include permit information returned after February 14, 1994.

b The number of fishermen who fished based on returned permits.

c Includes residents from the communities of Fairbanks, College, Ester, Ft. Wainwright, North Pole, Salcha, and Two Rivers.
Personal use fishermen were not asked for dog information since personal use fish could only be used for human consumption or bait.

d Includes 98 chum salmon (that died in the live box) given away as part of the Departments Manley test fish wheel program.

e Includes residents from the communities of Anchorage, Dot Lake, Northway, Paxson, and Rampart.

f Includes 6 households that fished two different permit areas.

Table 24. Salmon retained from commercial catches for subsistence use; these salmon were caught by commercial fishermen and not sold, 1993.

Source: Survey Information (Table 14).

District	Chinook	Summer Chum	Fall Chum	Coho
1	**15**	**299**		
2	**3**	**120**	There was no fall	
3	0	0	season	
4	**978**	32,149	commercial fishing.	
5	695	**159**		
6	Permit Required Area			

Source: Fish Ticket Information.

District	Chinook	Summer Chum	Fall Chum	Coho
1	13	99		
2	2	91	There was no fall	
3	**10**	**21**	season	
4	94	24,033 a	commercial fishing.	
5	**746**	9		
6	**1,037**	**5**		

Source: Highest of either Survey or Fish Ticket Information as shown in bold print above.

District	Chinook	Summer Chum	Fall Chum	Coho
1	15	299		
2	3	120	There was no fall	
3	10	21	season	
4	978	b	commercial fishing.	
5	746	159		
6	1,037	5		
Total	2,789	604		

a Estimated harvest equals potential summer chum salmon available for subsistence use for District 4 was 42,930 salmon based on expanding the roe harvested by roe weight and sex ratio. Subdistrict 4-A 20,485 pounds of roe equaled 38,196 summer chum salmon and Subdistricts 4-B and 4-C 1,962 pounds of roe equaled 4,734 salmon.

b District 4 summer chum salmon are documented in the commercial related category since the fish were harvested for the primary purpose of commercial roe sales.

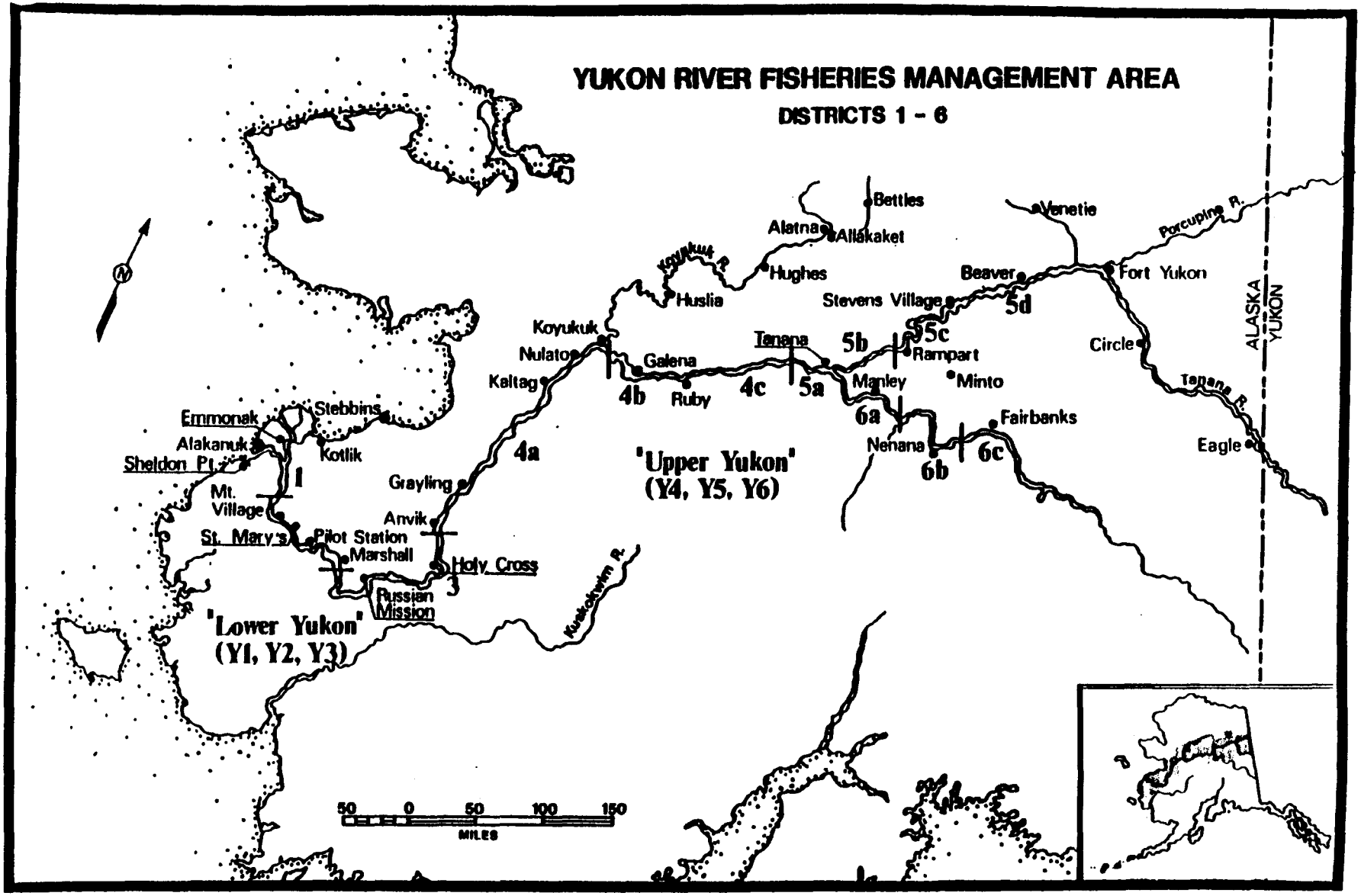


Figure 1. The Alaskan portion of the Yukon River drainage, showing communities and fishing districts.

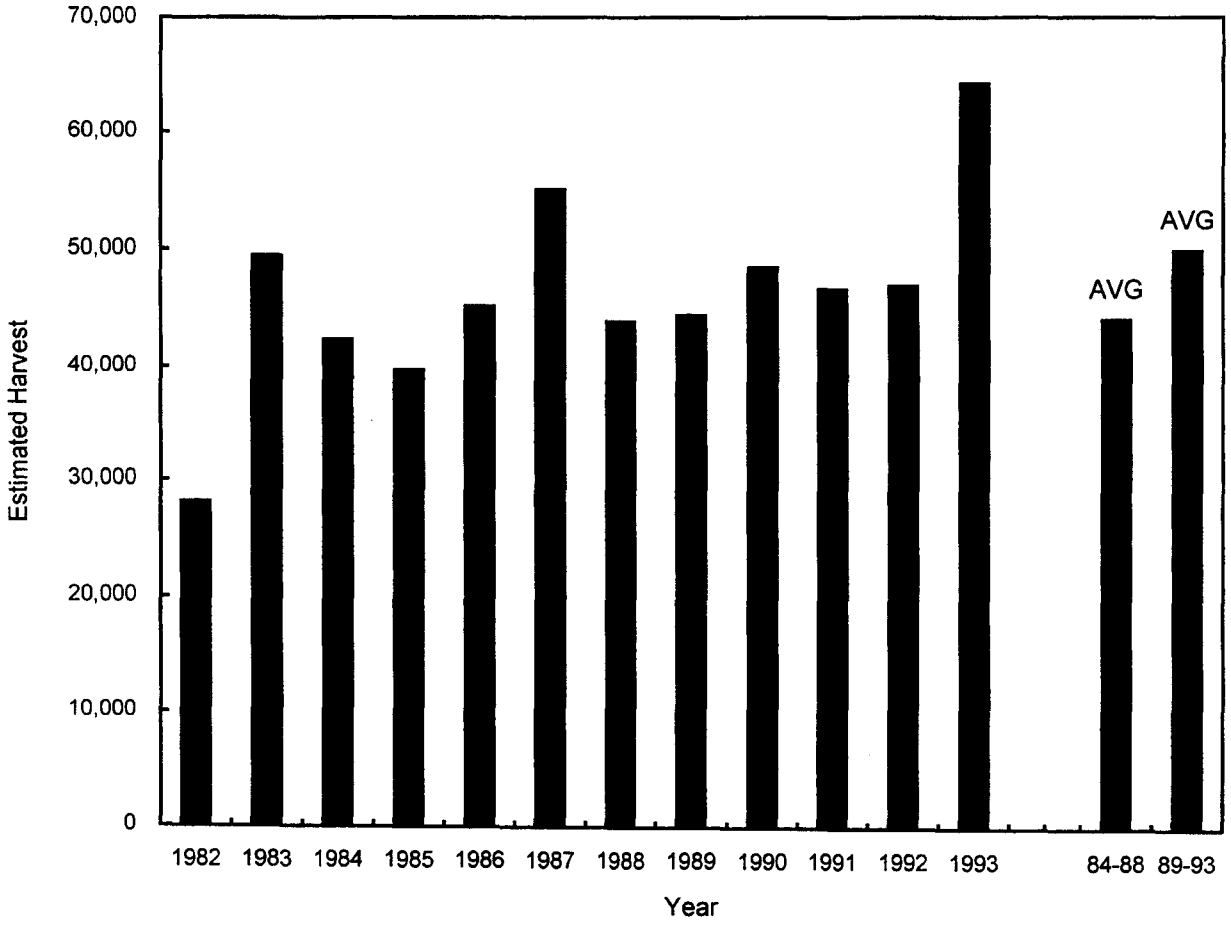


Figure 2. The estimated number of chinook salmon harvested in Yukon River subsistence salmon fisheries in Alaska since 1982. Note: Beginning in 1988, subsistence salmon harvest estimates have been generated from a stratified random sample of village households.

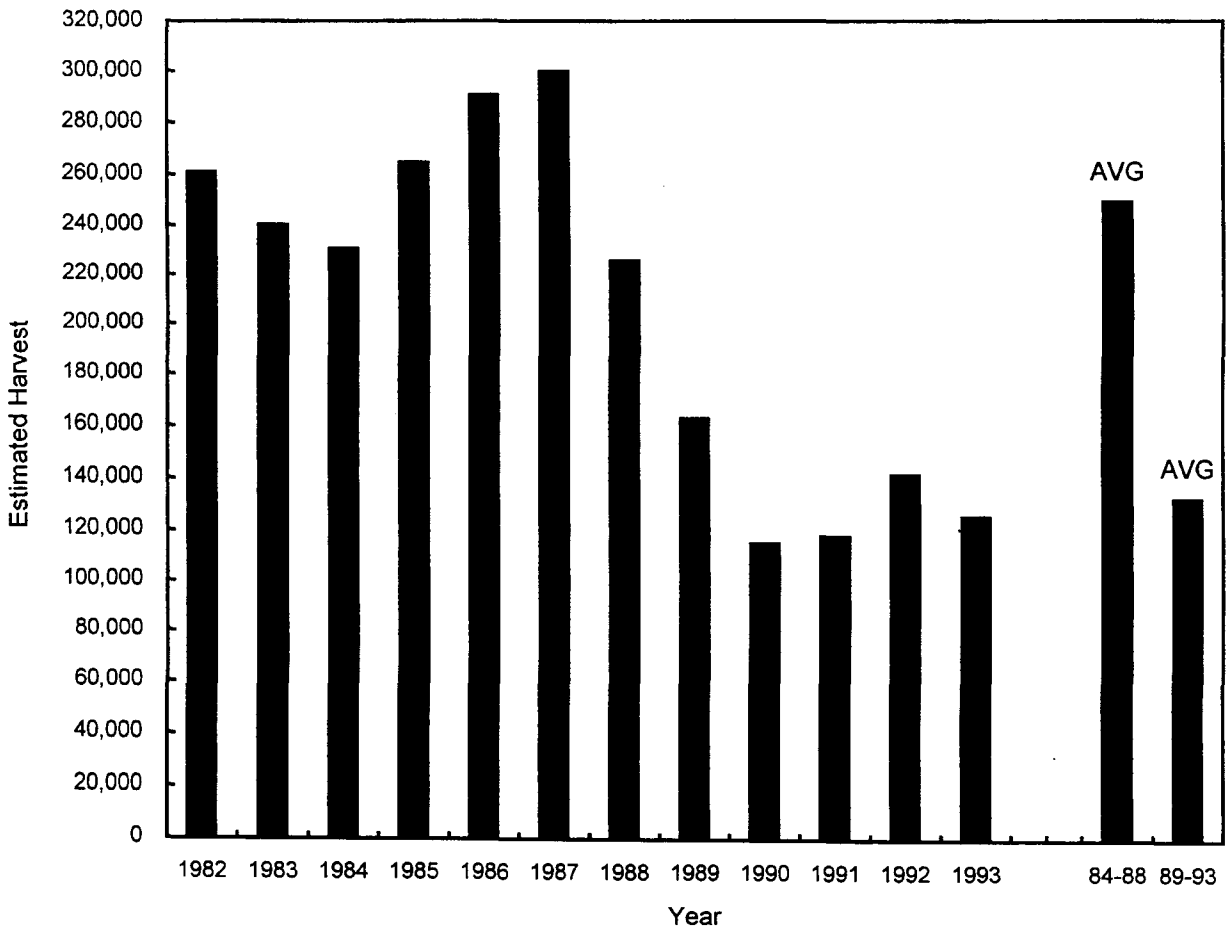


Figure 3. The estimated number of summer chum salmon harvested in Yukon River subsistence salmon fisheries in Alaska since 1982. Note: Summer chum salmon harvest estimates prior to 1988, included commercial caught summer chum salmon carcasses retained for subsistence use; beginning in 1988, efforts were made to exclude commercial carcasses from the District 4 subsistence harvest estimate. Beginning in 1988, subsistence salmon harvest estimates have been generated from a stratified random sample of village households.

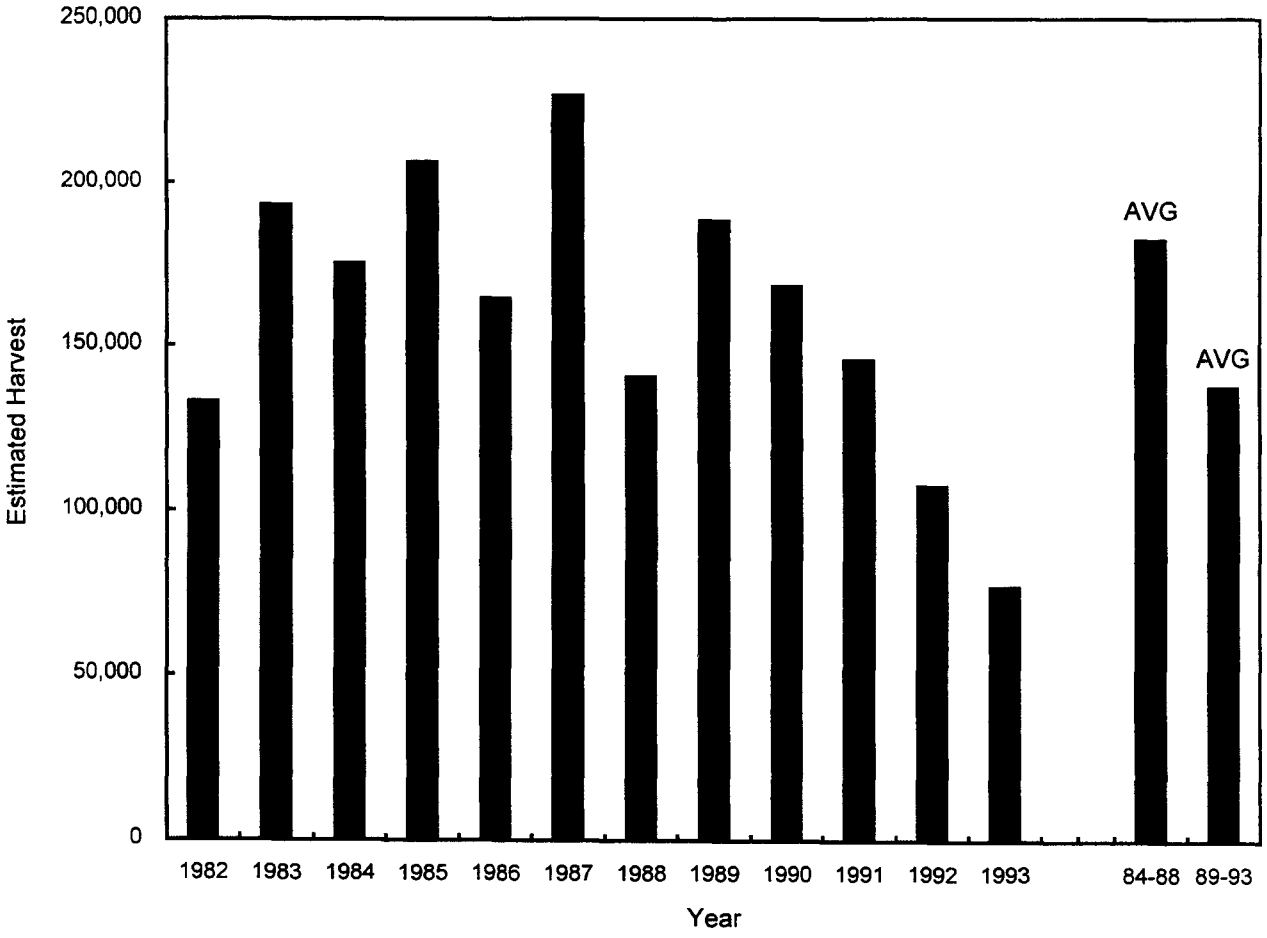


Figure 4. The estimated number of fall chum salmon harvested in Yukon River subsistence salmon fisheries in Alaska since 1982. Note: Beginning in 1988, subsistence salmon harvest estimates have been generated from a stratified random sample of village households.

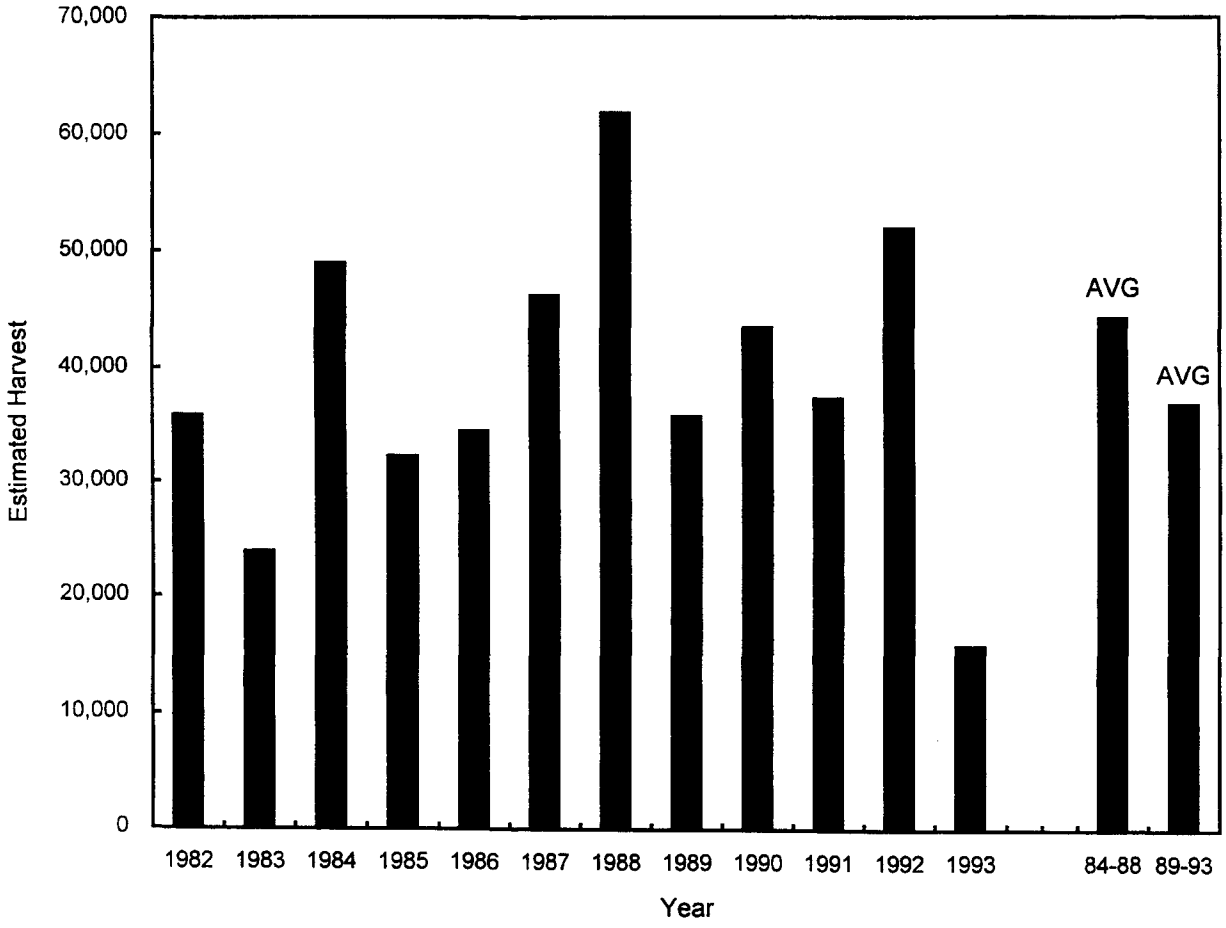
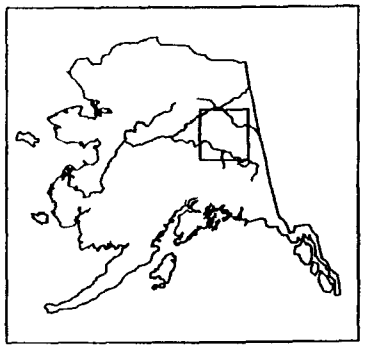
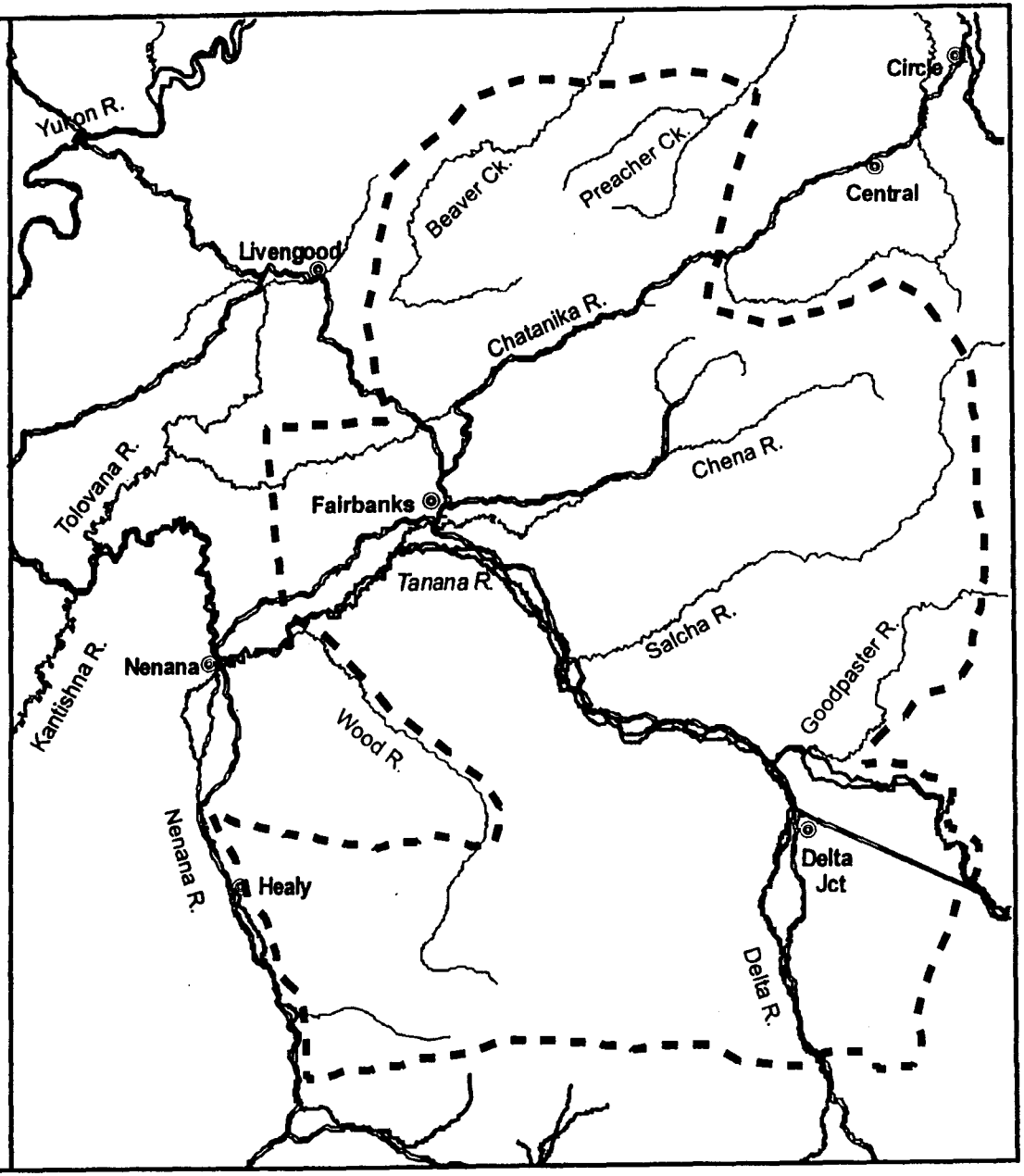


Figure 5. The estimated number of coho salmon harvested in Yukon River subsistence salmon fisheries in Alaska since 1982. Note: Beginning in 1988, subsistence salmon harvest estimates have been generated from a stratified random sample of village households.

5 AAC 99.015 JOINT BOARD NONSUBSISTENCE AREAS. (4) The Fairbanks Nonsubsistence Area is comprised of the following: within Unit 20(A) as defined by 5 AAC 92.450(20)(A) east of the Wood River drainage and south of the Rex Trail but including the upper Wood River drainage south of its confluence with Chicken Creek, within Unit 20(B) as defined by 5 AAC 92.450(20)(B) the North Star Borough and that portion of the Washington Creek drainage east of the Elliot Highway, within Unit 20(D) as defined by 5 AAC 92.450(20)(D) west of the Tanana River between its confluence's with the Johnson and Delta Rivers, west of the west bank of the Johnson River, and north and west of the Volkmar drainage, including the Goodpaster River drainage, and within Unit 25(C) as defined by 5 AAC 92.450(25)(C) the Preacher and Beaver Creek drainages.





F 6. The Fairbanks Nonsubsistence Area.

APPENDIX A

DETAILED YUKON RIVER SALMON HARVEST ESTIMATES AND RELATED INFORMATION

Appendix A.1. Estimated Yukon River chinook salmon subsistence harvest by residents of surveyed villages, by catch stratum, with village and district totals; N indicates the total number of households and n indicates the number of households with complete harvest information, 1993.

Community	Unknown Catch				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total		Est CI (95%)
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total (+/-)
Hooper Bay	86	15	1.9	0.6	8	5	0.0	0.0	26	4	0.7	0.4	17	15	2.4	0.3	3	3	1.0	0.0	140	42	230 110
Scammon Bay	53	8	15.6	6.8	7	5	20.0	9.4	23	7	2.7	1.2	7	6	24.0	6.0	0	0	-	-	90	26	1,199 734
Sheldon's Point	3	3	7.6	0.0	2	1	0.0	4.1	17	15	18.2	2.1	8	8	28.6	0.0	0	0	-	-	30	27	561 72
Alakanuk	8	3	7.3	5.7	40	5	0.6	0.3	63	17	33.5	9.7	11	10	33.4	1.8	0	0	-	-	122	35	2,562 1,209
Emmonak	34	5	42.8	39.5	55	12	15.2	6.7	55	24	6.9	2.6	11	10	30.8	2.8	1	1	75.0	0.0	156	52	3,088 2,749
Kotlik	20	3	6.6	3.0	22	3	0.0	0.0	43	13	7.8	4.5	14	13	77.0	3.2	4	4	265.7	0.0	103	36	2,613 414
District 1	**204**	**37**	**13.1**	**6.8**	**134**	**31**	**7.5**	**2.8**	**227**	**80**	**14.2**	**2.9**	**68**	**62**	**32.7**	**1.0**	**8**	**8**	**142.6**	**0.0**	**641**	**218**	**10,253 3,122**
Mountain Village	27	3	2.3	1.3	44	4	27.2	13.5	65	18	18.2	3.6	18	14	41.4	4.1	1	1	25.0	0.0	155	40	3,217 1,266
Pitkas Point	7	5	10.4	3.3	5	4	0.7	0.3	8	8	3.0	0.0	7	7	128.5	0.0	0	0	-	-	27	24	1,001 45
St. Mary's	25	3	0.0	0.0	20	5	0.0	0.0	37	10	13.9	4.9	22	21	54.6	2.5	4	4	81.5	0.0	108	43	2,042 373
Pilot Station	8	4	0.0	0.0	36	10	6.5	3.7	47	23	30.7	6.6	4	3	112.6	26.5	1	0	60.6	18.3	96	40	2,190 699
Marshall	5	5	8.0	0.0	10	4	6.0	3.6	48	12	41.2	12.7	7	7	71.2	0.0	1	1	13.0	0.0	71	29	2,592 1,198
District 2	**72**	**20**	**2.4**	**0.6**	**115**	**27**	**13.0**	**5.3**	**205**	**71**	**25.1**	**3.6**	**58**	**52**	**65.5**	**2.4**	**7**	**6**	**60.7**	**2.6**	**457**	**176**	**11,042 1,915**
Russian Mission	7	2	0.0	0.0	17	5	29.4	24.7	27	8	70.8	25.8	7	7	102.1	0.0	1	0	144.5	64.5	59	22	3,273 1,599
Holy Cross	31	4	0.0	0.0	14	4	45.0	38.0	26	10	52.7	13.7	9	9	100.2	0.0	2	2	144.5	0.0	82	29	3,191 1,255
District 3	**38**	**6**	**0.0**	**0.0**	**31**	**9**	**36.4**	**21.8**	**53**	**18**	**62.0**	**14.7**	**16**	**16**	**101.1**	**0.0**	**3**	**2**	**144.5**	**21.5**	**141**	**51**	**6,464 2,033**
Anvik	2	1	0.0	0.2	15	4	5.0	4.2	14	5	26.8	14.8	5	5	10.6	0.0	3	3	53.3	0.0	39	18	663 426
Grayling	4	1	0.0	0.2	19	5	15.0	12.8	7	4	10.0	6.5	20	20	28.1	0.0	4	4	31.7	0.0	54	34	1,045 487
Kaltag	6	4	0.5	0.2	12	2	0.0	0.0	20	6	30.3	11.7	13	12	44.2	3.2	2	2	37.5	0.0	53	26	1,260 468
Nulato	27	4	1.5	1.3	33	4	0.0	0.0	20	6	31.1	17.5	14	14	71.1	0.0	1	1	0.0	0.0	95	29	1,660 691
Koyukuk	6	4	0.0	0.0	15	4	0.0	0.0	16	5	18.0	13.9	4	4	41.2	0.0	2	2	200.0	0.0	43	19	853 436
Galena	44	8	0.5	0.4	61	6	0.0	0.0	52	13	17.2	5.9	16	14	28.0	3.1	3	3	122.0	0.0	176	44	1,732 620
Ruby	21	3	0.0	0.0	33	4	0.0	0.0	17	4	116.2	83.7	11	9	74.7	13.2	5	5	92.8	0.0	87	25	3,263 2,806
Shageluk	7	5	1.4	0.7	11	4	2.0	1.5	9	5	0.0	0.0	10	9	4.4	1.0	3	3	17.3	0.0	40	26	128 41
Huslia	15	3	0.0	0.0	28	5	0.2	0.1	12	5	0.0	0.0	11	11	10.0	0.0	5	5	23.0	0.0	71	29	232 9
Hughes	2	2	0.0	0.0	4	4	0.0	0.0	7	7	7.1	0.0	6	6	6.3	0.0	0	0	-	-	19	19	88 0
Allakaket	5	5	0.0	0.0	13	5	0.0	0.0	12	4	1.2	1.0	11	11	9.0	0.0	2	2	10.0	0.0	43	27	135 24
Alatna	0	0	-	-	5	5	0.0	0.0	2	2	0.0	0.0	4	3	1.0	0.5	0	0	-	-	11	10	4 3
Bettles	7	5	0.0	0.0	20	19	0.0	0.0	6	6	0.1	0.0	0	0	-	-	0	0	-	-	33	30	1 0
District 4	**146**	**45**	**0.5**	**0.2**	**269**	**71**	**1.4**	**0.9**	**194**	**72**	**25.3**	**7.9**	**125**	**118**	**31.4**	**1.2**	**30**	**30**	**59.3**	**0.0**	**764**	**336**	**11,064 3,093**
Tanana	26	2	0.0	0.0	55	5	0.0	0.0	19	4	17.5	15.5	12	7	13.7	4.7	22	18	130.2	13.4	134	36	3,362 826
Rampart	0	0	-	-	10	8	0.6	0.2	3	2	50.0	0.0	8	7	90.4	14.4	6	6	179.3	0.0	27	23	1,956 226
Stevens Village	2	1	0.0	1.4	16	12	21.5	7.2	6	6	44.6	0.0	5	5	181.8	0.0	4	2	58.0	41.0	33	26	1,754 393
Birch Creek	3	2	0.0	0.0	10	4	0.0	0.0	6	4	0.0	0.0	0	0	-	-	0	0	-	-	19	10	0 0
Beaver	0	0	-	-	15	9	13.3	8.4	12	8	46.0	17.3	5	4	135.5	37.7	1	0	127.5	23.1	33	21	1,557 605
Fort Yukon	71	7	3.5	3.3	89	6	33.3	32.1	38	6	0.0	0.0	23	16	107.2	19.9	7	7	96.2	0.0	228	42	6,361 5,706
Venetie	31	3	0.0	0.0	22	4	105.0	94.9	7	3	33.3	25.1	9	6	5.0	2.8	1	0	127.5	23.1	70	16	2,716 4,110
Chalkyitsik	5	2	0.0	0.0	18	9	0.0	0.0	7	4	0.0	0.0	4	4	0.0	0.0	0	0	-	-	34	19	0 0
District 5	**138**	**17**	**1.8**	**1.7**	**235**	**57**	**24.8**	**15.1**	**98**	**37**	**15.7**	**4.1**	**66**	**49**	**75.5**	**7.7**	**41**	**33**	**124.4**	**8.2**	**578**	**193**	**17,706 7,121**
Survey Totals	**598**	**125**	**5.3**	**2.3**	**784**	**195**	**12.6**	**4.7**	**777**	**278**	**23.3**	**2.6**	**333**	**297**	**49.7**	**1.6**	**89**	**79**	**99.8**	**3.8**	**2,581**	**974**	**56,529 8,822**

Appendix A.2. Estimated Yukon River summer chum salmon subsistence harvest by residents of surveyed villages, by catch stratum with village and district totals; N indicates the total number of households and n indicates the number of households with complete harvest information, 1993.

Community	Unknown Catch				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Total		Combined Est	CI (95%)
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)
Hooper Bay	86	15	99.6	26.8	8	5	0.0	0.0	26	4	126.2	63.8	17	15	232.4	28.0	3	3	100.0	0.0	140	42	16,106	5,652
Scammon Bay	53	8	41.6	14.9	7	5	30.0	16.0	23	7	42.1	20.4	7	6	186.6	26.1	0	0	-	-	90	26	4,692	1,851
Sheldon's Point	3	3	7.6	0.0	2	1	30.0	20.6	17	15	93.1	10.8	8	8	87.0	0.0	0	0	-	-	30	27	2,362	371
Alakanuk	8	3	31.6	25.0	40	5	7.6	4.5	63	17	103.9	30.8	11	10	166.3	6.0	0	0	-	-	122	35	8,935	3,844
Emmonak	34	5	77.4	60.8	55	12	98.0	43.7	55	24	36.5	10.4	11	10	201.2	17.9	1	1	475.0	0.0	156	52	12,722	6,331
Kotlik	20	3	55.0	25.6	22	3	13.3	12.3	43	13	16.6	11.5	14	13	194.9	10.1	4	4	254.0	0.0	103	36	5,856	1,523
District 1	**204**	**37**	**72.5**	**15.9**	**134**	**31**	**46.7**	**18.1**	**227**	**80**	**66.6**	**11.9**	**68**	**62**	**187.1**	**8.3**	**8**	**8**	**223.9**	**0.0**	**641**	**218**	**50,673**	**9,628**
Mountain Village	27	3	7.0	3.3	44	4	34.5	20.7	65	18	85.4	22.6	18	14	180.2	13.7	1	1	0.0	0.0	155	40	10,505	3,432
Pitkas Point	7	5	45.0	12.8	5	4	0.5	0.2	8	8	15.0	0.0	7	7	149.0	0.0	0	0	-	-	27	24	1,481	176
St. Mary's	25	3	0.0	0.0	20	5	0.0	0.0	37	10	51.0	16.4	22	21	148.4	6.1	4	4	193.0	0.0	108	43	5,925	1,222
Pilot Station	8	4	0.0	0.0	36	10	25.0	21.2	47	23	45.0	13.5	4	3	90.6	28.8	1	0	163.1	49.5	96	40	3,543	1,967
Marshall	5	5	30.0	0.0	10	4	0.2	0.1	48	12	16.5	5.6	7	7	84.1	0.0	1	1	207.0	0.0	71	29	1,745	531
District 2	**72**	**20**	**9.1**	**1.7**	**115**	**27**	**21.1**	**10.3**	**205**	**71**	**51.1**	**8.4**	**58**	**52**	**146.6**	**5.2**	**7**	**6**	**163.2**	**7.0**	**457**	**176**	**23,199**	**4,178**
Russian Mission	7	2	0.0	0.0	17	5	8.4	7.0	27	8	38.2	13.7	7	7	68.1	0.0	1	0	185.5	114.5	59	22	1,838	796
Holy Cross	31	4	0.0	0.0	14	4	0.0	0.0	26	10	36.0	14.2	9	9	23.3	0.0	2	2	185.5	0.0	82	29	1,517	724
District 3	**38**	**6**	**0.0**	**0.0**	**31**	**9**	**4.6**	**3.8**	**53**	**18**	**37.1**	**9.8**	**16**	**16**	**42.9**	**0.0**	**3**	**2**	**185.5**	**38.1**	**141**	**51**	**3,355**	**1,076**
Anvik	2	1	0.0	0.0	15	4	0.0	0.0	14	5	6.8	5.4	5	5	196.0	0.0	3	3	220.0	0.0	39	18	1,735	149
Grayling	4	1	0.0	0.0	19	5	15.0	12.8	7	4	0.0	0.0	20	20	33.8	0.0	4	4	43.7	0.0	54	34	1,137	479
Kaltag	6	4	0.0	0.0	12	2	0.0	0.0	20	6	32.8	22.8	13	12	35.3	6.0	2	2	0.0	0.0	53	26	1,116	907
Nulato	27	4	0.0	0.0	33	4	0.0	0.0	20	6	0.0	0.0	14	14	1.0	0.0	1	1	0.0	0.0	95	29	15	0
Koyukuk	6	4	0.0	0.0	15	4	0.0	0.0	16	5	0.6	0.4	4	4	5.0	0.0	2	2	100.0	0.0	43	19	230	15
Galena	44	8	0.0	0.0	61	6	0.0	0.0	52	13	9.5	6.6	16	14	25.7	4.7	3	3	522.6	0.0	176	44	2,477	695
Ruby	21	3	0.0	0.0	33	4	0.0	0.0	17	4	0.0	0.0	11	9	56.7	23.6	5	5	166.8	0.0	87	25	1,459	509
Shageluk	7	5	0.0	0.0	11	4	42.5	33.9	9	5	0.0	0.0	10	9	152.2	24.6	3	3	731.0	0.0	40	26	4,183	876
Huslia	15	3	0.0	0.0	28	5	14.0	12.6	12	5	0.0	0.0	11	11	386.4	0.0	5	5	740.0	0.0	71	29	8,343	696
Hughes	2	2	0.0	0.0	4	4	0.0	0.0	7	7	18.5	0.0	6	6	116.1	0.0	0	0	-	-	19	19	827	0
Allakaket	5	5	0.0	0.0	13	5	0.0	0.0	12	4	49.5	40.4	11	11	85.1	0.0	2	2	560.0	0.0	43	27	2,651	950
Alatna	0	0	-	-	5	5	6.0	0.0	2	2	1.0	0.0	4	3	5.0	2.5	0	0	-	-	11	10	52	19
Bettles	7	5	0.0	0.0	20	19	0.0	0.0	6	6	5.6	0.0	0	0	-	-	0	0	-	-	33	30	34	0
District 4	**146**	**45**	**0.0**	**0.0**	**269**	**71**	**4.4**	**2.1**	**194**	**72**	**10.4**	**3.8**	**125**	**118**	**84.9**	**3.0**	**30**	**30**	**348.3**	**0.0**	**764**	**336**	**24,259**	**1,994**
Tanana	26	2	0.0	0.0	55	5	0.0	0.0	19	4	0.0	0.0	12	7	47.1	21.6	22	18	167.2	24.0	134	36	4,245	1,154
Rampart	0	0	-	-	10	8	0.0	0.0	3	2	150.0	86.6	8	7	14.8	2.6	6	6	153.3	0.0	27	23	1,489	510
Stevens Village	2	1	0.0	0.0	16	12	0.0	0.0	6	6	0.1	0.0	5	5	0.0	0.0	4	2	163.0	115.2	33	26	653	903
Birch Creek	3	2	0.0	0.0	10	4	0.0	0.0	6	4	0.0	0.0	0	0	-	-	0	0	-	-	19	10	0	0
Beaver	0	0	-	-	15	9	0.0	0.0	12	8	0.2	0.1	5	4	0.2	0.1	1	0	129.3	35.3	33	21	134	69
Fort Yukon	71	7	0.0	0.0	89	6	41.6	40.2	38	6	0.0	0.0	23	16	4.7	1.8	7	7	1.7	0.0	228	42	3,830	7,019
Venetie	31	3	0.0	0.0	22	4	0.0	0.0	7	3	0.0	0.0	9	6	0.0	0.0	1	0	129.3	35.3	70	16	129	69
Chalkyitsik	5	2	0.0	0.0	18	9	0.0	0.0	7	4	0.0	0.0	4	4	0.0	0.0	0	0	-	-	34	19	0	0
District 5	**138**	**17**	**0.0**	**0.0**	**235**	**57**	**15.8**	**15.2**	**98**	**37**	**4.6**	**2.6**	**66**	**49**	**12.0**	**4.0**	**41**	**33**	**134.7**	**17.1**	**578**	**193**	**10,480**	**7,189**
Survey Totals	**598**	**125**	**25.8**	**5.4**	**784**	**195**	**17.5**	**5.7**	**777**	**278**	**38.6**	**4.3**	**333**	**297**	**100.1**	**2.3**	**89**	**79**	**218.7**	**8.0**	**2,581**	**974**	**111,966**	**12,922**

Appendix A.3. Estimated Yukon River fall chum salmon subsistence harvest by residents of surveyed villages, by catch stratum, with village and district totals; N indicates the total number of households and n indicates the number of households with complete harvest information, 1993.

Community	Unknown Catch				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Combined Heavy Harvester				Total		Est	CI (95%)
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)
Hooper Bay	86	15	0.0	0.0	8	5	0.0	0.0	26	4	0.0	0.0	17	15	6.6	2.2	3	3	0.0	0.0	140	42	113	76
Scammon Bay	53	8	0.1	0.1	7	5	0.0	0.0	23	7	0.0	0.0	7	6	0.0	0.0	0	0	-	-	90	26	7	11
Sheldon's Point	3	3	0.0	0.0	2	1	0.0	9.6	17	15	8.9	1.9	8	8	0.7	0.0	0	0	-	-	30	27	158	76
Alakanuk	8	3	0.0	0.0	40	5	0.0	0.0	63	17	2.5	1.8	11	10	1.7	0.3	0	0	-	-	122	35	182	223
Emmonak	34	5	1.0	0.9	55	12	0.1	0.1	55	24	0.2	0.1	11	10	7.8	1.6	1	1	0.0	0.0	156	52	143	74
Kotlik	20	3	0.0	0.0	22	3	100.0	92.9	43	13	5.0	2.0	14	13	49.9	7.0	4	4	120.2	0.0	103	36	3,595	4,015
District 1	**204**	**37**	**0.2**	**0.1**	**134**	**31**	**16.5**	**15.2**	**227**	**80**	**2.4**	**0.6**	**68**	**62**	**13.6**	**1.5**	**8**	**8**	**60.1**	**0.0**	**641**	**218**	**4,198**	**4,024**
Mountain Village	27	3	8.0	7.5	44	4	7.5	7.1	65	18	3.2	1.8	18	14	19.8	3.9	1	1	0.0	0.0	155	40	1,113	784
Pitkas Point	7	5	0.0	0.0	5	4	0.0	0.0	8	8	0.0	0.0	7	7	38.2	0.0	0	0	-	-	27	24	268	0
St. Mary's	25	3	0.0	0.0	20	5	0.0	0.0	37	10	0.0	0.0	22	21	11.6	1.4	4	4	46.0	0.0	108	43	440	63
Pilot Station	8	4	0.0	0.0	36	10	0.0	0.0	47	23	4.5	3.1	4	3	30.0	7.6	1	0	30.6	30.0	96	40	365	298
Marshall	5	5	0.0	0.0	10	4	0.0	0.0	48	12	0.0	0.0	7	7	36.5	0.0	1	1	0.0	0.0	71	29	256	0
District 2	**72**	**20**	**3.0**	**2.8**	**115**	**27**	**2.9**	**2.7**	**205**	**71**	**2.1**	**0.9**	**58**	**52**	**21.7**	**1.4**	**7**	**6**	**30.7**	**4.2**	**457**	**176**	**2,442**	**842**
Russian Mission	7	2	0.0	0.0	17	5	0.0	0.0	27	8	4.3	3.6	7	7	0.4	0.0	1	0	51.0	51.0	59	22	172	218
Holy Cross	31	4	5.0	4.6	14	4	0.0	0.0	26	10	20.5	8.3	9	9	30.6	0.0	2	2	51.0	0.0	82	29	1,066	510
District 3	**38**	**6**	**4.1**	**3.8**	**31**	**9**	**0.0**	**0.0**	**53**	**18**	**12.3**	**4.4**	**16**	**16**	**17.4**	**0.0**	**3**	**2**	**51.0**	**17.0**	**141**	**51**	**1,238**	**554**
Anvik	2	1	0.0	0.4	15	4	0.0	0.0	14	5	20.0	16.0	5	5	10.0	0.0	3	3	30.0	0.0	39	18	420	440
Grayling	4	1	0.0	0.4	19	5	30.0	25.7	7	4	17.5	7.7	20	20	54.5	0.0	4	4	75.0	0.0	54	34	2,083	964
Kaltag	6	4	2.5	1.4	12	2	0.0	0.0	20	6	15.5	5.0	13	12	27.5	2.9	2	2	10.0	0.0	53	26	704	211
Nulato	27	4	0.0	0.0	33	4	0.0	0.0	20	6	12.0	9.0	14	14	23.6	0.0	1	1	0.0	0.0	95	29	571	355
Koyukuk	6	4	5.5	1.8	15	4	3.5	2.9	16	5	4.0	3.3	4	4	50.5	0.0	2	2	850.0	0.0	43	19	2,052	138
Galena	44	8	0.0	0.0	61	6	0.0	0.0	52	13	5.5	2.7	16	14	68.2	14.5	3	3	624.6	0.0	176	44	3,255	537
Ruby	21	3	0.0	0.0	33	4	0.0	0.0	17	4	18.7	16.3	11	9	11.1	4.7	5	5	128.8	0.0	87	25	1,085	555
Shageluk	7	5	0.0	0.0	11	4	0.0	0.0	9	5	0.0	0.0	10	9	21.1	4.4	3	3	0.0	0.0	40	26	211	86
Huslia	15	3	0.0	0.0	28	5	0.0	0.0	12	5	0.0	0.0	11	11	3.4	0.0	5	5	44.0	0.0	71	29	258	0
Hughes	2	2	0.0	0.0	4	4	0.0	0.0	7	7	8.5	0.0	6	6	18.1	0.0	0	0	-	-	19	19	169	0
Allakaket	5	5	0.0	0.0	13	5	0.0	0.0	12	4	0.0	0.0	11	11	16.5	0.0	2	2	25.5	0.0	43	27	233	0
Alatna	0	0	-	-	5	5	0.4	0.0	2	2	0.0	0.0	4	3	0.0	0.0	0	0	-	-	11	10	2	0
Bettles	7	5	0.0	0.0	20	19	0.0	0.0	6	6	0.0	0.0	0	0	-	-	0	0	-	-	33	30	0	0
District 4	**146**	**45**	**0.3**	**0.0**	**269**	**71**	**2.3**	**1.8**	**194**	**72**	**8.7**	**2.2**	**125**	**118**	**30.3**	**1.9**	**30**	**30**	**163.3**	**0.0**	**764**	**336**	**11,043**	**1,385**
Tanana	26	2	0.0	0.0	55	5	0.0	0.0	19	4	0.0	0.0	12	7	60.0	36.6	22	18	1,017.3	83.9	134	36	23,103	3,722
Rampart	0	0	-	-	10	8	0.0	0.0	3	2	0.0	0.0	8	7	18.5	5.0	6	6	520.5	0.0	27	23	3,272	78
Stevens Village	2	1	0.0	23.5	16	12	0.8	0.4	6	6	0.5	0.0	5	5	2.4	0.0	4	2	208.5	147.4	33	26	862	1,159
Birch Creek	3	2	0.0	0.0	10	4	0.0	0.0	6	4	0.0	0.0	0	0	-	-	0	0	-	-	19	10	0	0
Beaver	0	0	-	-	15	9	0.0	0.0	12	8	0.0	0.0	5	4	3.7	1.6	1	0	672.7	145.0	33	21	692	284
Fort Yukon	71	7	0.0	0.0	89	6	0.0	0.0	38	6	50.0	45.8	23	16	5.7	2.5	7	7	49.7	0.0	228	42	2,380	3,419
Venetie	31	3	133.3	126.7	22	4	0.0	0.0	7	3	240.0	173.9	9	6	155.0	65.5	1	0	672.7	145.0	70	16	7,881	8,148
Chalkyitsik	5	2	0.0	0.0	18	9	0.0	0.0	7	4	25.0	16.3	4	4	75.0	0.0	0	0	-	-	34	19	475	224
District 5	**138**	**17**	**30.0**	**28.4**	**235**	**57**	**0.1**	**0.0**	**98**	**37**	**38.3**	**21.7**	**66**	**49**	**41.3**	**11.1**	**41**	**33**	**683.7**	**47.5**	**578**	**193**	**38,665**	**9,665**
Survey Totals	**598**	**125**	**7.7**	**6.5**	**784**	**195**	**4.1**	**2.7**	**777**	**278**	**9.1**	**2.8**	**333**	**297**	**26.9**	**2.3**	**89**	**79**	**379.6**	**21.9**	**2,581**	**974**	**57,586**	**10,609**

Appendix A.4. Estimated Yukon River coho salmon subsistence harvest by residents of surveyed villages, by catch stratum, with village and district totals; N indicates the total number of households and n indicates the number of households with complete harvest information, 1993.

	Unknown Catch				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total		Combined Est	CI (95%)
Community	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)
Hooper Bay	86	15	0.0	0.0	8	5	0.0	0.0	26	4	0.0	0.0	17	15	0.0	0.0	3	3	0.0	0.0	140	42	0	0
Scammon Bay	53	8	0.1	0.1	7	5	1.0	0.5	23	7	0.1	0.1	7	6	3.3	1.2	0	0	-	-	90	26	40	22
Sheldon's Point	3	3	0.0	0.0	2	1	0.0	1.9	17	15	3.8	0.9	8	8	1.5	0.0	0	0	-	-	30	27	78	31
Alakanuk	8	3	0.3	0.2	40	5	1.2	1.1	63	17	1.0	0.8	11	10	2.2	0.5	0	0	-	-	122	35	138	137
Emmonak	34	5	0.0	0.0	55	12	0.0	0.0	55	24	0.2	0.1	11	10	0.4	0.1	1	1	0.0	0.0	156	52	16	12
Kotlik	20	3	1.6	1.5	22	3	20.0	18.5	43	13	2.3	0.9	14	13	11.3	1.5	4	4	42.5	0.0	103	36	901	808
District 1	**204**	**37**	**0.2**	**0.1**	**134**	**31**	**3.7**	**3.0**	**227**	**80**	**1.1**	**0.3**	**68**	**62**	**3.3**	**0.3**	**8**	**8**	**21.3**	**0.0**	**641**	**218**	**1,173**	**821**
Mountain Village	27	3	0.6	0.6	44	4	0.0	0.0	65	18	3.3	1.5	18	14	11.2	3.1	1	1	10.0	0.0	155	40	447	231
Pitkas Point	7	5	0.0	0.0	5	4	0.0	0.0	8	8	0.0	0.0	7	7	49.8	0.0	0	0	-	-	27	24	349	0
St. Mary's	25	3	0.0	0.0	20	5	0.0	0.0	37	10	0.7	0.5	22	21	2.9	0.6	4	4	2.7	0.0	108	43	102	50
Pilot Station	8	4	0.0	0.0	36	10	0.0	0.0	47	23	4.3	3.1	4	3	11.6	3.0	1	0	3.5	2.2	96	40	255	287
Marshall	5	5	2.0	0.0	10	4	0.0	0.0	48	12	5.0	4.3	7	7	10.0	0.0	1	1	0.0	0.0	71	29	320	407
District 2	**72**	**20**	**0.4**	**0.2**	**115**	**27**	**0.0**	**0.0**	**205**	**71**	**3.4**	**1.3**	**58**	**52**	**12.6**	**1.0**	**7**	**6**	**3.5**	**0.3**	**457**	**176**	**1,473**	**552**
Russian Mission	7	2	0.0	0.0	17	5	0.0	0.0	27	8	1.6	1.3	7	7	15.4	0.0	1	0	0.0	0.0	59	22	152	72
Holy Cross	31	4	0.0	0.0	14	4	0.0	0.0	26	10	3.0	1.9	9	9	1.1	0.0	2	2	0.0	0.0	82	29	88	99
District 3	**38**	**6**	**0.0**	**0.0**	**31**	**9**	**0.0**	**0.0**	**53**	**18**	**2.3**	**1.1**	**16**	**16**	**7.4**	**0.0**	**3**	**2**	**0.0**	**0.0**	**141**	**51**	**240**	**123**
Anvik	2	1	0.0	0.0	15	4	0.0	0.0	14	5	0.0	0.0	5	5	20.0	0.0	3	3	5.0	0.0	39	18	115	0
Grayling	4	1	0.0	0.0	19	5	2.6	2.2	7	4	2.5	1.6	20	20	4.1	0.0	4	4	3.7	0.0	54	34	164	86
Kaltag	6	4	0.0	0.0	12	2	0.0	0.0	20	6	14.0	6.7	13	12	2.5	0.5	2	2	10.0	0.0	53	26	334	264
Nulato	27	4	0.0	0.0	33	4	0.0	0.0	20	6	0.8	0.6	14	14	1.4	0.0	1	1	0.0	0.0	95	29	37	27
Koyukuk	6	4	0.0	0.0	15	4	0.0	0.0	16	5	0.0	0.0	4	4	0.0	0.0	2	2	35.0	0.0	43	19	70	0
Galena	44	8	0.0	0.0	61	6	0.0	0.0	52	13	0.7	0.6	16	14	4.0	0.9	3	3	6.3	0.0	176	44	124	74
Ruby	21	3	0.0	0.0	33	4	0.0	0.0	17	4	0.0	0.0	11	9	0.0	0.0	5	5	61.6	0.0	87	25	308	0
Shageluk	7	5	0.0	0.0	11	4	0.0	0.0	9	5	0.0	0.0	10	9	3.8	0.9	3	3	0.0	0.0	40	26	39	17
Huslia	15	3	0.0	0.0	28	5	0.0	0.0	12	5	0.0	0.0	11	11	0.6	0.0	5	5	0.4	0.0	71	29	9	0
Hughes	2	2	0.0	0.0	4	4	0.0	0.0	7	7	0.0	0.0	6	6	0.5	0.0	0	0	-	-	19	19	3	0
Allakaket	5	5	0.0	0.0	13	5	0.0	0.0	12	4	0.0	0.0	11	11	0.2	0.0	2	2	0.0	0.0	43	27	3	0
Alatna	0	0	-	-	5	5	0.0	0.0	2	2	0.0	0.0	4	3	0.0	0.0	0	0	-	-	11	10	0	0
Bettles	7	5	0.0	0.0	20	19	0.0	0.0	6	6	0.0	0.0	0	0	-	-	0	0	-	-	33	30	0	0
District 4	**146**	**45**	**0.0**	**0.0**	**269**	**71**	**0.2**	**0.1**	**194**	**72**	**1.8**	**0.7**	**125**	**118**	**2.8**	**0.1**	**30**	**30**	**15.0**	**0.0**	**764**	**336**	**1,206**	**290**
Tanana	26	2	0.0	0.0	55	5	0.0	0.0	19	4	0.0	0.0	12	7	14.2	9.2	22	18	245.6	43.5	134	36	5,576	1,890
Rampart	0	0	-	-	10	8	0.0	0.0	3	2	0.0	0.0	8	7	1.0	0.3	6	6	5.0	0.0	27	23	38	5
Stevens Village	2	1	0.0	0.0	16	12	0.0	0.0	6	6	0.0	0.0	5	5	0.0	0.0	4	2	0.0	0.0	33	26	0	0
Birch Creek	3	2	0.0	0.0	10	4	0.0	0.0	6	4	0.0	0.0	0	0	-	-	0	0	-	-	19	10	0	0
Beaver	0	0	-	-	15	9	0.0	0.0	12	8	0.0	0.0	5	4	0.0	0.0	1	0	134.9	59.0	33	21	135	115
Fort Yukon	71	7	0.0	0.0	89	6	0.0	0.0	38	6	0.0	0.0	23	16	0.1	0.1	7	7	0.1	0.0	228	42	5	4
Venetie	31	3	0.0	0.0	22	4	0.0	0.0	7	3	0.0	0.0	9	6	0.0	0.0	1	0	134.9	59.0	70	16	135	115
Chalkyitsik	5	2	0.0	0.0	18	9	0.0	0.0	7	4	0.0	0.0	4	4	0.0	0.0	0	0	-	-	34	19	0	0
District 5	**138**	**17**	**0.0**	**0.0**	**235**	**57**	**0.0**	**0.0**	**98**	**37**	**0.0**	**0.0**	**66**	**49**	**2.8**	**1.6**	**41**	**33**	**139.2**	**23.4**	**578**	**193**	**5,889**	**1,897**
Survey Totals	**598**	**125**	**0.1**	**0.0**	**784**	**195**	**0.7**	**0.5**	**777**	**278**	**1.8**	**0.4**	**333**	**297**	**4.8**	**0.3**	**89**	**79**	**71.3**	**10.8**	**2,581**	**974**	**9,981**	**2,162**

Appendix A.5. Estimated Yukon River chinook salmon subsistence use by residents of surveyed villages, by catch stratum, with village and district totals; N indicates the total number of households and n indicates the number of households with complete subsistence use information, 1993.

Community	Unknown Catch				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total		Est	CI (95%)
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)
Hooper Bay	86	15	1.6	0.4	8	5	2.8	1.2	26	4	0.5	0.2	17	15	1.5	0.1	3	3	0.3	0.0	140	42	206	87
Scammon Bay	53	8	14.3	5.9	7	5	13.0	2.9	23	7	3.2	1.2	7	6	16.5	3.0	0	0	-	-	90	26	1,044	622
Sheldon's Point	3	3	7.6	0.0	2	1	0.0	2.0	17	15	17.2	1.9	8	8	30.5	0.0	0	0	-	-	30	27	559	64
Alakanuk	8	3	7.3	5.7	40	5	1.2	0.5	63	17	27.8	6.3	11	10	29.7	1.8	0	0	-	-	122	35	2,186	786
Emmonak	34	5	10.0	9.2	55	12	9.6	3.9	55	24	10.2	2.7	11	10	28.6	2.2	1	1	50.0	0.0	156	52	1,800	805
Kotlik	20	3	2.3	1.3	22	3	0.0	0.0	43	13	15.2	5.9	14	13	59.0	3.5	4	4	127.2	0.0	103	36	2,038	510
District 1	**204**	**37**	**6.7**	**2.2**	**134**	**31**	**5.2**	**1.6**	**227**	**80**	**14.8**	**2.1**	**68**	**62**	**27.3**	**0.9**	**8**	**8**	**70.0**	**0.0**	**641**	**218**	**7,833**	**1,388**
Mountain Village	27	3	2.3	1.3	44	4	21.2	14.1	65	18	19.6	4.3	18	14	31.1	3.6	1	1	25.0	0.0	155	40	2,858	1,344
Pitkas Point	7	5	11.4	3.1	5	4	1.0	0.3	8	8	6.8	0.0	7	7	114.8	0.0	0	0	-	-	27	24	944	42
St. Mary's	25	3	0.0	0.0	20	5	0.4	0.3	37	10	17.3	7.3	22	21	46.2	1.6	4	4	65.2	0.0	108	43	1,926	534
Pilot Station	8	4	2.5	1.7	36	10	9.6	3.6	47	23	32.6	6.7	4	3	132.6	22.3	1	0	49.5	19.7	96	40	2,478	698
Marshall	5	5	0.8	0.0	10	4	6.0	3.6	48	12	30.3	11.3	7	7	69.7	0.0	1	1	11.0	0.0	71	29	2,019	1,073
District 2	**72**	**20**	**2.3**	**0.6**	**115**	**27**	**11.8**	**5.5**	**205**	**71**	**24.2**	**3.6**	**58**	**52**	**58.6**	**2.0**	**7**	**6**	**49.5**	**2.8**	**457**	**176**	**10,225**	**1,932**
Russian Mission	7	2	0.0	0.0	17	5	34.4	23.7	27	8	69.0	25.8	7	7	104.0	0.0	1	0	108.0	48.0	59	22	3,284	1,582
Holy Cross	31	4	2.5	2.3	14	4	27.0	7.2	26	10	33.6	7.8	9	8	42.2	4.3	2	2	108.0	0.0	82	28	1,925	476
District 3	**38**	**6**	**2.0**	**1.9**	**31**	**9**	**31.1**	**13.4**	**53**	**18**	**51.6**	**13.7**	**16**	**15**	**69.3**	**2.4**	**3**	**2**	**108.0**	**16.0**	**141**	**50**	**5,209**	**1,653**
Anvik	2	1	3.0	0.5	15	4	5.7	4.6	14	5	32.4	12.6	5	5	5.2	0.0	3	3	53.3	0.0	39	18	732	373
Grayling	4	1	0.0	0.5	19	5	8.4	4.2	7	4	22.5	8.6	20	20	23.8	0.0	4	4	20.7	0.0	54	34	877	198
Kaltag	6	4	6.0	2.6	12	2	1.0	0.9	20	6	26.0	4.9	13	11	33.8	3.0	2	2	30.0	0.0	53	25	1,068	213
Nulato	27	4	1.7	1.0	33	4	9.0	3.7	20	6	18.5	6.5	14	14	38.7	0.0	1	1	40.0	0.0	95	29	1,297	357
Koyukuk	6	4	1.2	0.7	15	4	1.7	0.9	16	5	18.0	13.8	4	3	47.0	10.4	2	2	108.5	0.0	43	18	727	444
Galena	44	8	1.7	0.6	61	6	1.1	0.4	52	13	14.3	3.7	16	14	28.4	3.0	3	3	146.6	0.0	176	44	1,791	407
Ruby	21	3	1.0	0.5	33	4	2.7	1.5	17	4	83.5	63.2	11	9	60.7	13.6	5	5	102.0	0.0	87	25	2,710	2,129
Shageluk	7	5	1.6	0.8	11	4	5.5	2.7	9	5	0.4	0.2	10	9	7.3	1.4	3	3	17.3	0.0	40	26	201	66
Huslia	15	3	0.0	0.0	28	5	1.2	0.3	12	5	1.4	0.6	11	11	5.4	0.0	5	5	5.4	0.0	71	29	137	24
Hughes	2	2	0.0	0.0	4	4	0.7	0.0	7	7	5.1	0.0	6	6	6.1	0.0	0	0	-	-	19	19	76	0
Allakaket	5	5	0.2	0.0	13	5	0.8	0.2	12	4	2.7	1.3	11	11	4.9	0.0	2	2	7.5	0.0	43	27	113	31
Alatna	0	0	-	-	5	5	0.0	0.0	2	2	0.5	0.0	4	3	1.3	0.4	0	0	-	-	11	10	6	3
Bettles	7	5	0.4	0.2	20	19	0.8	0.0	6	6	0.8	0.0	0	0	-	-	0	0	-	-	33	30	25	4
District 4	**146**	**45**	**1.4**	**0.3**	**269**	**71**	**3.2**	**0.6**	**194**	**72**	**20.9**	**5.8**	**125**	**116**	**24.2**	**1.3**	**30**	**30**	**53.5**	**0.0**	**764**	**334**	**9,760**	**2,292**
Tanana	26	2	1.5	1.4	55	5	3.8	2.6	19	4	20.5	11.9	12	7	12.0	4.2	22	18	137.4	15.6	134	36	3,805	868
Rampart	0	0	-	-	10	8	3.6	0.7	3	2	50.0	0.0	8	7	82.5	14.8	6	6	175.1	0.0	27	23	1,898	232
Stevens Village	2	1	10.0	1.7	16	12	24.2	7.0	6	6	46.1	0.0	5	5	180.8	0.0	4	2	59.0	40.3	33	26	1,825	385
Birch Creek	3	2	0.0	0.0	10	4	0.0	0.0	6	4	0.0	0.0	0	0	-	-	0	0	-	-	19	10	0	0
Beaver	0	0	-	-	15	9	14.4	4.3	12	8	39.0	11.8	5	4	26.7	7.3	1	0	125.1	24.5	33	21	944	319
Fort Yukon	71	7	5.8	3.7	89	6	27.5	23.6	38	6	3.6	1.4	23	16	55.1	10.7	7	7	69.5	0.0	228	42	4,758	4,191
Venetie	31	3	0.0	0.0	22	4	15.0	13.5	7	3	33.3	25.1	9	6	5.1	2.8	1	0	125.1	24.5	70	16	735	683
Chalkyitsik	5	2	0.0	0.0	18	9	0.8	0.4	7	4	0.0	0.0	4	4	0.2	0.0	0	0	-	-	34	19	17	16
District 5	**138**	**17**	**3.4**	**1.9**	**235**	**57**	**15.5**	**9.0**	**98**	**37**	**16.9**	**3.3**	**66**	**49**	**47.8**	**4.2**	**41**	**33**	**123.1**	**9.3**	**578**	**193**	**13,982**	**4,370**
Survey Totals	**598**	**125**	**3.9**	**0.8**	**784**	**195**	**9.6**	**2.9**	**777**	**278**	**21.6**	**2.1**	**333**	**294**	**37.7**	**1.0**	**89**	**79**	**88.6**	**4.3**	**2,581**	**971**	**47,009**	**5,722**

Appendix A.6. Estimated Yukon River summer chum salmon subsistence use by residents of surveyed villages, by catch stratum, with village and district totals; N indicates the total number of households and n indicates the number of households with complete subsistence use information, 1993.

	Unknown Catch				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Total		Combined Est	CI (95%)
Community	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)
Hooper Bay	86	15	116.2	26.4	8	5	113.8	39.7	26	4	133.7	47.2	17	15	138.0	6.3	3	3	45.0	0.0	140	42	16,868	5,108
Scammon Bay	53	8	31.3	8.9	7	5	52.0	14.6	23	7	50.7	19.6	7	6	145.0	13.6	0	0	-	-	90	26	4,208	1,308
Sheldon's Point	3	3	9.0	0.0	2	1	32.0	15.7	17	15	79.4	9.4	8	8	117.6	0.0	0	0	-	-	30	27	2,383	319
Alakanuk	8	3	38.6	30.5	40	5	10.2	3.8	63	17	100.3	29.6	11	10	134.3	7.2	0	0	-	-	122	35	8,517	3,705
Emmonak	34	5	42.4	16.2	55	12	89.0	22.3	55	24	57.3	9.6	11	10	183.0	6.7	1	1	300.0	0.0	156	52	11,803	2,847
Kotlik	20	3	23.6	10.6	22	3	9.0	5.4	43	13	31.3	11.4	14	13	133.0	6.5	4	4	135.5	0.0	103	36	4,426	1,095
District 1	**204**	**37**	**68.2**	**11.8**	**134**	**31**	**51.0**	**9.6**	**227**	**80**	**74.1**	**10.5**	**68**	**62**	**142.0**	**2.9**	**8**	**8**	**122.1**	**0.0**	**641**	**218**	**48,205**	**7,137**
Mountain Village	27	3	19.3	10.9	44	4	34.5	20.7	65	18	91.6	22.3	18	14	120.1	9.8	1	1	0.0	0.0	155	40	10,161	3,433
Pitkas Point	7	5	48.0	11.7	5	4	3.0	0.5	8	8	31.2	0.0	7	7	130.4	0.0	0	0	-	-	27	24	1,514	161
St. Mary's	25	3	8.0	6.1	20	5	5.0	4.3	37	10	41.8	9.7	22	21	133.1	5.3	4	4	132.0	0.0	108	43	5,304	823
Pilot Station	8	4	2.2	0.9	36	10	35.2	21.9	47	23	42.6	12.3	4	3	122.6	20.1	1	0	88.0	40.8	96	40	3,869	1,931
Marshall	5	5	2.0	0.0	10	4	0.2	0.1	48	12	38.6	13.5	7	7	63.2	0.0	1	1	0.0	0.0	71	29	2,312	1,278
District 2	**72**	**20**	**15.1**	**4.7**	**115**	**27**	**25.2**	**10.5**	**205**	**71**	**56.7**	**8.4**	**58**	**52**	**119.6**	**3.9**	**7**	**6**	**88.0**	**5.8**	**457**	**176**	**23,160**	**4,226**
Russian Mission	7	2	2.0	1.6	17	5	9.4	6.8	27	8	38.2	13.7	7	7	66.7	0.0	1	0	150.0	100.0	59	22	1,824	787
Holy Cross	31	4	0.0	0.0	14	4	0.0	0.0	26	10	36.4	14.1	9	8	10.2	2.4	2	2	150.0	0.0	82	28	1,339	722
District 3	**38**	**6**	**0.4**	**0.3**	**31**	**9**	**5.2**	**3.7**	**53**	**18**	**37.3**	**9.8**	**16**	**15**	**35.0**	**1.3**	**3**	**2**	**150.0**	**33.3**	**141**	**50**	**3,163**	**1,068**
Anvik	2	1	5.0	1.3	15	4	75.7	64.0	14	5	142.2	107.3	5	5	526.8	0.0	3	3	746.6	0.0	39	18	8,011	3,495
Grayling	4	1	0.0	1.3	19	5	170.0	78.6	7	4	125.0	81.8	20	20	226.4	0.0	4	4	584.7	0.0	54	34	10,973	3,137
Kaltag	6	4	0.0	0.0	12	2	0.0	0.0	20	6	87.8	46.6	13	11	278.2	42.2	2	2	522.0	0.0	53	25	6,418	2,120
Nulato	27	4	0.0	0.0	33	4	0.2	0.2	20	6	62.6	52.2	14	14	118.6	0.0	1	1	0.0	0.0	95	29	2,923	2,048
Koyukuk	6	4	0.0	0.0	15	4	0.0	0.0	16	5	0.6	0.4	4	3	5.0	2.5	2	2	290.0	0.0	43	18	610	25
Galena	44	8	0.0	0.0	61	6	0.0	0.0	52	13	17.8	10.0	16	14	228.2	38.0	3	3	794.6	0.0	176	44	6,965	1,572
Ruby	21	3	0.0	0.0	33	4	0.5	0.4	17	4	0.0	0.0	11	9	31.7	12.9	5	5	261.0	0.0	87	25	1,671	281
Shageluk	7	5	14.4	6.2	11	4	44.0	33.5	9	5	12.0	8.0	10	9	101.1	20.5	3	3	724.3	0.0	40	26	3,877	843
Huslia	15	3	0.0	0.0	28	5	3.0	2.7	12	5	1.0	0.7	11	11	422.8	0.0	5	5	720.0	0.0	71	29	8,347	150
Hughes	2	2	0.0	0.0	4	4	0.0	0.0	7	7	20.7	0.0	6	6	127.8	0.0	0	0	-	-	19	19	912	0
Allakaket	5	5	3.2	0.0	13	5	1.0	0.7	12	4	49.5	40.4	11	11	51.8	0.0	2	2	547.5	0.0	43	27	2,288	950
Alatna	0	0	-	-	5	5	4.0	0.0	2	2	1.0	0.0	4	3	8.3	2.2	0	0	-	-	11	10	55	17
Bettles	7	5	0.0	0.0	20	19	0.0	0.0	6	6	6.6	0.0	0	0	-	-	0	0	-	-	33	30	40	0
District 4	**146**	**45**	**0.9**	**0.3**	**269**	**71**	**18.6**	**6.7**	**194**	**72**	**39.8**	**11.5**	**125**	**116**	**188.0**	**6.8**	**30**	**30**	**558.7**	**0.0**	**764**	**334**	**53,090**	**5,911**
Tanana	26	2	0.0	0.0	55	5	0.0	0.0	19	4	0.0	0.0	12	7	57.1	22.7	22	18	167.7	24.1	134	36	4,377	1,169
Rampart	0	0	-	-	10	8	0.0	0.0	3	2	150.0	86.6	8	7	14.2	2.6	6	6	153.3	0.0	27	23	1,484	510
Stevens Village	2	1	0.0	0.2	16	12	0.0	0.0	6	6	0.1	0.0	5	5	0.0	0.0	4	2	163.0	115.2	33	26	653	903
Birch Creek	3	2	0.0	0.0	10	4	0.0	0.0	6	4	0.0	0.0	0	0	-	-	0	0	-	-	19	10	0	0
Beaver	0	0	-	-	15	9	0.0	0.0	12	8	0.2	0.1	5	4	0.2	0.1	1	0	129.6	35.4	33	21	134	69
Fort Yukon	71	7	1.0	0.6	89	6	0.0	0.0	38	6	41.6	38.2	23	16	10.0	3.7	7	7	1.7	0.0	228	42	1,896	2,854
Venetie	31	3	0.0	0.0	22	4	0.0	0.0	7	3	0.0	0.0	9	6	0.0	0.0	1	0	129.6	35.4	70	16	130	69
Chalkyitsik	5	2	0.0	0.0	18	9	0.0	0.0	7	4	0.0	0.0	4	4	0.0	0.0	0	0	-	-	34	19	0	0
District 5	**138**	**17**	**0.5**	**0.3**	**235**	**57**	**0.0**	**0.0**	**98**	**37**	**20.8**	**15.0**	**66**	**49**	**15.6**	**4.3**	**41**	**33**	**135.0**	**17.1**	**578**	**193**	**8,674**	**3,255**
Survey Totals	**598**	**125**	**25.4**	**4.0**	**784**	**195**	**19.0**	**3.2**	**777**	**278**	**51.7**	**5.1**	**333**	**294**	**125.2**	**2.8**	**89**	**79**	**273.5**	**8.0**	**2,581**	**971**	**136,292**	**10,747**

Appendix A.7. Estimated Yukon River fall chum salmon subsistence use by residents of surveyed villages, by catch stratum, with village and district totals; N indicates the total number of households and n indicates the number of households with complete subsistence use information, 1993.

Community	Unknown Catch				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total		Est	CI (95%)
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)
Hooper Bay	86	15	0.0	0.0	8	5	0.0	0.0	26	4	0.0	0.0	17	15	2.2	0.7	3	3	0.0	0.0	140	42	39	25
Scammon Bay	53	8	0.1	0.1	7	5	0.0	0.0	23	7	0.0	0.0	7	6	0.0	0.0	0	0	-	-	90	26	7	11
Sheldon's Point	3	3	0.0	0.0	2	1	0.0	5.1	17	15	6.9	1.9	8	8	6.3	0.0	0	0	-	-	30	27	169	67
Alakanuk	8	3	0.0	0.0	40	5	0.0	0.0	63	17	2.2	1.8	11	10	1.7	0.3	0	0	-	-	122	35	163	223
Emmonak	34	5	0.0	0.0	55	12	5.1	4.4	55	24	0.7	0.3	11	10	9.3	1.4	1	1	0.0	0.0	156	52	430	478
Kotlik	20	3	0.3	0.3	22	3	50.0	46.4	43	13	7.9	4.1	14	13	43.2	4.6	4	4	95.2	0.0	103	36	2,434	2,037
District 1	**204**	**37**	**0.1**	**0.0**	**134**	**31**	**10.3**	**7.8**	**227**	**80**	**2.8**	**0.9**	**68**	**62**	**12.0**	**1.0**	**8**	**8**	**47.6**	**0.0**	**641**	**218**	**3,242**	**2,106**
Mountain Village	27	3	8.0	7.5	44	4	7.5	7.1	65	18	2.4	1.5	18	14	17.6	3.9	1	1	0.0	0.0	155	40	1,022	772
Pitkas Point	7	5	0.0	0.0	5	4	0.0	0.0	8	8	0.0	0.0	7	7	38.2	0.0	0	0	-	-	27	24	268	0
St. Mary's	25	3	0.0	0.0	20	5	0.0	0.0	37	10	0.0	0.0	22	21	11.5	1.4	4	4	23.5	0.0	108	43	348	63
Pilot Station	8	4	0.0	0.0	36	10	1.0	0.8	47	23	2.8	1.8	4	3	30.0	7.6	1	0	15.6	15.0	96	40	304	193
Marshall	5	5	0.0	0.0	10	4	0.0	0.0	48	12	0.0	0.0	7	7	29.4	0.0	1	1	0.0	0.0	71	29	206	0
District 2	**72**	**20**	**3.0**	**2.8**	**115**	**27**	**3.2**	**2.7**	**205**	**71**	**1.4**	**0.6**	**58**	**52**	**20.1**	**1.4**	**7**	**6**	**15.7**	**2.1**	**457**	**176**	**2,148**	**799**
Russian Mission	7	2	1.5	1.2	17	5	0.8	0.6	27	8	4.3	3.6	7	7	0.4	0.0	1	0	37.5	37.5	59	22	183	209
Holy Cross	31	4	8.7	4.8	14	4	0.0	0.0	26	10	20.5	5.9	9	8	21.3	4.8	2	2	37.5	0.0	82	28	1,072	428
District 3	**38**	**6**	**7.4**	**3.9**	**31**	**9**	**0.4**	**0.3**	**53**	**18**	**12.3**	**3.4**	**16**	**15**	**12.2**	**2.7**	**3**	**2**	**37.5**	**12.5**	**141**	**50**	**1,255**	**476**
Anvik	2	1	0.0	0.5	15	4	0.0	0.0	14	5	23.0	15.6	5	5	11.6	0.0	3	3	23.3	0.0	39	18	450	428
Grayling	4	1	0.0	0.5	19	5	13.0	8.3	7	4	42.5	14.2	20	20	64.6	0.0	4	4	50.0	0.0	54	34	2,038	366
Kaltag	6	4	7.5	2.7	12	2	0.0	0.0	20	6	7.8	2.5	13	11	27.8	3.8	2	2	7.5	0.0	53	25	578	144
Nulato	27	4	0.0	0.0	33	4	3.7	3.5	20	6	7.3	5.4	14	14	11.5	0.0	1	1	0.0	0.0	95	29	432	312
Koyukuk	6	4	6.5	1.5	15	4	7.7	3.1	16	5	4.0	2.0	4	3	38.0	18.5	2	2	225.0	0.0	43	18	821	184
Galena	44	8	0.0	0.0	61	6	6.1	4.5	52	13	6.1	2.5	16	14	64.2	13.4	3	3	401.3	0.0	176	44	2,929	740
Ruby	21	3	0.0	0.0	33	4	0.0	0.0	17	4	9.2	5.2	11	9	120.8	30.8	5	5	194.8	0.0	87	25	2,461	686
Shageluk	7	5	0.0	0.0	11	4	0.0	0.0	9	5	0.0	0.0	10	9	12.2	3.1	3	3	0.0	0.0	40	26	122	61
Huslia	15	3	0.0	0.0	28	5	0.0	0.0	12	5	0.0	0.0	11	11	3.4	0.0	5	5	39.0	0.0	71	29	233	0
Hughes	2	2	0.0	0.0	4	4	0.0	0.0	7	7	8.5	0.0	6	6	17.6	0.0	0	0	-	-	19	19	166	0
Allakaket	5	5	0.0	0.0	13	5	0.8	0.6	12	4	0.0	0.0	11	11	10.4	0.0	2	2	6.5	0.0	43	27	138	15
Alatna	0	0	-	-	5	5	0.4	0.0	2	2	0.0	0.0	4	3	0.0	0.0	0	0	-	-	11	10	2	0
Bettles	7	5	0.0	0.0	20	19	0.0	0.0	6	6	0.0	0.0	0	0	-	-	0	0	-	-	33	30	0	0
District 4	**146**	**45**	**0.6**	**0.1**	**269**	**71**	**3.3**	**1.2**	**194**	**72**	**7.9**	**1.6**	**125**	**116**	**38.1**	**3.3**	**30**	**30**	**104.0**	**0.0**	**764**	**334**	**10,370**	**1,222**
Tanana	26	2	2.5	2.4	55	5	0.2	0.1	19	4	0.0	0.0	12	7	53.4	31.9	22	18	1,122.9	84.6	134	36	25,422	3,729
Rampart	0	0	-	-	10	8	0.8	0.1	3	2	0.0	0.0	8	7	61.4	12.7	6	6	520.5	0.0	27	23	3,623	199
Stevens Village	2	1	25.0	23.4	16	12	9.1	4.1	6	6	0.5	0.0	5	5	2.4	0.0	4	2	208.5	147.4	33	26	1,046	1,166
Birch Creek	3	2	0.0	0.0	10	4	0.0	0.0	6	4	0.0	0.0	0	0	-	-	0	0	-	-	19	10	0	0
Beaver	0	0	-	-	15	9	16.4	5.6	12	8	30.7	10.8	5	4	191.2	63.3	1	0	730.1	150.1	33	21	2,302	751
Fort Yukon	71	7	0.0	0.0	89	6	0.0	0.0	38	6	50.5	28.8	23	16	5.7	2.5	7	7	48.8	0.0	228	42	2,393	2,153
Venetie	31	3	133.3	126.7	22	4	0.0	0.0	7	3	26.6	13.3	9	6	155.0	65.5	1	0	730.1	150.1	70	16	6,445	7,793
Chalkyitsik	5	2	0.0	0.0	18	9	43.8	7.5	7	4	95.0	29.9	4	4	195.0	0.0	0	0	-	-	34	19	2,235	490
District 5	**138**	**17**	**30.8**	**28.4**	**235**	**57**	**5.1**	**0.7**	**98**	**37**	**32.1**	**11.5**	**66**	**49**	**66.8**	**11.8**	**41**	**33**	**743.0**	**47.9**	**578**	**193**	**43,466**	**9,027**
Survey Totals	**598**	**125**	**8.1**	**6.5**	**784**	**195**	**4.9**	**1.4**	**777**	**278**	**8.1**	**1.5**	**333**	**294**	**34.1**	**2.6**	**89**	**79**	**384.1**	**22.0**	**2,581**	**971**	**60,481**	**9,396**

Appendix A.8. Estimated Yukon River coho salmon subsistence use by residents of surveyed villages, by catch stratum, with village and district totals; N indicates the total number of households and n indicates the number of households with complete subsistence use information, 1993.

	Unknown Catch				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total		Combined Est	CI (95%)
Community	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)
Hooper Bay	86	15	0.0	0.0	8	5	0.0	0.0	26	4	0.0	0.0	17	15	0.0	0.0	3	3	0.0	0.0	140	42	0	0
Scammon Bay	53	8	0.1	0.1	7	5	1.0	0.5	23	7	0.1	0.1	7	6	3.3	1.2	0	0	-	-	90	26	40	22
Sheldon's Point	3	3	0.0	0.0	2	1	0.0	0.9	17	15	3.8	0.9	8	8	1.5	0.0	0	0	-	-	30	27	78	30
Alakanuk	8	3	0.3	0.2	40	5	1.2	1.1	63	17	0.3	0.3	11	10	2.2	0.5	0	0	-	-	122	35	97	96
Emmonak	34	5	0.0	0.0	55	12	0.0	0.0	55	24	0.2	0.1	11	10	0.2	0.0	1	1	0.0	0.0	156	52	14	11
Kotlik	20	3	1.0	0.9	22	3	10.6	8.9	43	13	4.6	2.2	14	13	6.0	1.0	4	4	30.7	0.0	103	36	660	434
District 1	**204**	**37**	**0.1**	**0.0**	**134**	**31**	**2.2**	**1.5**	**227**	**80**	**1.3**	**0.4**	**68**	**62**	**2.1**	**0.2**	**8**	**8**	**15.4**	**0.0**	**641**	**218**	**889**	**447**
Mountain Village	27	3	0.6	0.6	44	4	0.0	0.0	65	18	4.6	2.2	18	14	9.7	3.1	1	1	10.0	0.0	155	40	504	309
Pitkas Point	7	5	0.0	0.0	5	4	0.0	0.0	8	8	0.0	0.0	7	7	49.8	0.0	0	0	-	-	27	24	349	0
St. Mary's	25	3	0.0	0.0	20	5	0.0	0.0	37	10	0.2	0.1	22	21	2.9	0.6	4	4	2.7	0.0	108	43	83	29
Pilot Station	8	4	0.0	0.0	36	10	1.0	0.8	47	23	2.2	1.5	4	3	11.6	3.0	1	0	3.5	2.2	96	40	190	156
Marshall	5	5	0.0	0.0	10	4	0.0	0.0	48	12	0.0	0.0	7	7	5.7	0.0	1	1	0.0	0.0	71	29	40	0
District 2	**72**	**20**	**0.3**	**0.2**	**115**	**27**	**0.3**	**0.2**	**205**	**71**	**2.0**	**0.7**	**58**	**52**	**11.7**	**1.0**	**7**	**6**	**3.5**	**0.3**	**457**	**176**	**1,166**	**347**
Russian Mission	7	2	0.0	0.0	17	5	0.0	0.0	27	8	1.6	1.3	7	7	0.0	0.0	1	0	0.0	0.0	59	22	44	72
Holy Cross	31	4	0.0	0.0	14	4	0.0	0.0	26	10	3.0	1.9	9	8	0.0	0.0	2	2	0.0	0.0	82	28	78	99
District 3	**38**	**6**	**0.0**	**0.0**	**31**	**9**	**0.0**	**0.0**	**53**	**18**	**2.3**	**1.1**	**16**	**15**	**0.0**	**0.0**	**3**	**2**	**0.0**	**0.0**	**141**	**50**	**122**	**123**
Anvik	2	1	0.0	0.0	15	4	0.0	0.0	14	5	0.0	0.0	5	5	18.0	0.0	3	3	5.0	0.0	39	18	105	0
Grayling	4	1	0.0	0.0	19	5	1.2	1.0	7	4	2.5	1.6	20	20	6.9	0.0	4	4	2.0	0.0	54	34	186	44
Kaltag	6	4	0.0	0.0	12	2	0.0	0.0	20	6	9.8	6.6	13	11	5.5	1.7	2	2	7.5	0.0	53	25	284	266
Nulato	27	4	0.0	0.0	33	4	0.0	0.0	20	6	1.1	0.6	14	14	1.4	0.0	1	1	0.0	0.0	95	29	43	27
Koyukuk	6	4	0.0	0.0	15	4	0.0	0.0	16	5	0.0	0.0	4	3	0.0	0.0	2	2	35.0	0.0	43	18	70	0
Galena	44	8	0.0	0.0	61	6	0.0	0.0	52	13	0.6	0.3	16	14	4.0	0.9	3	3	6.3	0.0	176	44	116	48
Ruby	21	3	0.0	0.0	33	4	0.0	0.0	17	4	0.0	0.0	11	9	1.1	0.4	5	5	61.6	0.0	87	25	320	10
Shageluk	7	5	0.0	0.0	11	4	0.0	0.0	9	5	0.0	0.0	10	9	2.2	0.4	3	3	0.0	0.0	40	26	22	9
Huslia	15	3	0.0	0.0	28	5	0.0	0.0	12	5	0.0	0.0	11	11	0.6	0.0	5	5	0.4	0.0	71	29	9	0
Hughes	2	2	0.0	0.0	4	4	0.0	0.0	7	7	0.0	0.0	6	6	0.5	0.0	0	0	-	-	19	19	3	0
Allakaket	5	5	0.0	0.0	13	5	0.0	0.0	12	4	0.0	0.0	11	11	0.2	0.0	2	2	0.0	0.0	43	27	3	0
Alatna	0	0	-	-	5	5	0.0	0.0	2	2	0.0	0.0	4	3	0.0	0.0	0	0	-	-	11	10	0	0
Bettles	7	5	0.0	0.0	20	19	0.0	0.0	6	6	0.0	0.0	0	0	-	-	0	0	-	-	33	30	0	0
District 4	**146**	**45**	**0.0**	**0.0**	**269**	**71**	**0.1**	**0.0**	**194**	**72**	**1.4**	**0.7**	**125**	**116**	**3.5**	**0.2**	**30**	**30**	**14.6**	**0.0**	**764**	**334**	**1,161**	**276**
Tanana	26	2	0.0	0.0	55	5	0.0	0.0	19	4	0.0	0.0	12	7	7.1	4.6	22	18	245.6	43.5	134	36	5,490	1,880
Rampart	0	0	-	-	10	8	0.0	0.0	3	2	0.0	0.0	8	7	1.0	0.3	6	6	5.0	0.0	27	23	38	5
Stevens Village	2	1	0.0	0.0	16	12	0.0	0.0	6	6	0.0	0.0	5	5	0.0	0.0	4	2	0.0	0.0	33	26	0	0
Birch Creek	3	2	0.0	0.0	10	4	0.0	0.0	6	4	0.0	0.0	0	0	-	-	0	0	-	-	19	10	0	0
Beaver	0	0	-	-	15	9	0.0	0.0	12	8	0.0	0.0	5	4	0.0	0.0	1	0	134.9	59.0	33	21	135	115
Fort Yukon	71	7	0.0	0.0	89	6	0.0	0.0	38	6	0.0	0.0	23	16	0.1	0.1	7	7	0.0	0.0	228	42	4	4
Venetie	31	3	0.0	0.0	22	4	0.0	0.0	7	3	0.0	0.0	9	6	0.0	0.0	1	0	134.9	59.0	70	16	135	115
Chalkyitsik	5	2	0.0	0.0	18	9	0.0	0.0	7	4	0.0	0.0	4	4	0.0	0.0	0	0	-	-	34	19	0	0
District 5	**138**	**17**	**0.0**	**0.0**	**235**	**57**	**0.0**	**0.0**	**98**	**37**	**0.0**	**0.0**	**66**	**49**	**1.5**	**0.8**	**41**	**33**	**139.1**	**23.4**	**578**	**193**	**5,802**	**1,887**
Survey Totals	**598**	**125**	**0.1**	**0.0**	**784**	**195**	**0.4**	**0.2**	**777**	**278**	**1.4**	**0.3**	**333**	**294**	**4.1**	**0.2**	**89**	**79**	**70.7**	**10.8**	**2,581**	**971**	**9,140**	**1,994**

Appendix Table A.9. Estimated number of salmon given away by commercial fishermen to subsistence households and corresponding confidence intervals for Yukon Area surveyed villages; households contacted indicates households with complete information regarding salmon received from commercial fishermen, 1993.

Community	Catch Strata Combined		Chinook Salmon		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon	
	Total Households	Households Contacted	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)
Hooper Bay	140	42	0	0	0	0				
Scammon Bay	90	26	0	0	0	0				
Sheldon's Point	30	27	0	0	0	0	There was no fall season commercial fishing			
Alakanuk	122	35	0	0	0	0				
Emmonak	156	51	0	0	0	0				
Kotlik	103	36	0	0	0	0				
DISTRICT 1	*641*	*217*	*0*	*0*	*0*	*0*				
Mountain Village	155	40	0	0	0	0				
Pitkas Point	27	24	0	0	0	0				
St. Mary's	108	43	0	0	0	0				
Pilot Station	96	40	0	0	0	0				
Marshall	71	29	0	0	0	0				
DISTRICT 2	*457*	*176*	*0*	*0*	*0*	*0*				
Russian Mission	59	22	0	0	0	0				
Holy Cross	82	29	0	0	0	0				
DISTRICT 3	*141*	*51*	*0*	*0*	*0*	*0*				
Anvik	39	18	0	0	1,575	1,888				
Grayling	54	34	6	0	3,920	1,084				
Kaltag	53	26	11	5	1,625	277				
Nulato	95	29	13	21	1,490	2,049				
Koyukuk	43	19	0	0	0	0				
Galena	176	45	15	16	840	634				
Ruby	87	25	0	0	0	0				
Shageluk	40	27	0	0	0	0				
Huslia	71	29	0	0	0	0				
Hughes	19	19	0	0	0	0				
Allakaket	43	27	0	0	0	0				
Alatna	11	10	0	0	0	0				
Bettles	33	30	20	3	0	0				
DISTRICT 4	*764*	*338*	*65*	*28*	*9,450*	*3,069*				
Tanana	134	37	0	0	0	0				
Rampart	27	23	0	0	0	0				
Stevens Village	33	26	0	0	0	0				
Birch Creek	19	10	0	0	0	0				
Beaver	33	22	0	0	0	0				
Fort Yukon	228	42	0	0	0	0				
Venetie	70	16	0	0	0	0				
Chalkyitsik	34	19	0	0	0	0				
DISTRICT 5	*578*	*195*	*0*	*0*	*0*	*0*				
Survey Totals	2,581	977	65	28	9,450	3,069	0	0	0	0

Appendix Table A.10. Estimated number of salmon given away by subsistence fishermen to another subsistence household and corresponding confidence intervals for Yukon Area surveyed villages; households contacted indicates households with complete information regarding salmon received from another subsistence fishermen, 1993.

Community	Catch Strata Combined		Chinook Salmon		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon	
	Total Households	Households Contacted	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)
Hooper Bay	140	42	83	48	9,641	4,975	0	0	0	0
Scammon Bay	90	26	200	239	856	708	0	0	0	0
Sheldon's Point	30	27	41	8	323	69	30	0	0	0
Alakanuk	122	35	346	319	1,089	839	0	0	0	0
Emmonak	156	51	113	64	2,234	2,393	0	0	0	0
Kotlik	103	36	23	29	503	529	7	12	21	28
DISTRICT 1	*641*	*217*	*806*	*408*	*14,646*	*5,654*	*37*	*12*	*21*	*28*
Mountain Village	155	40	347	517	1,780	1,915	0	0	163	270
Pitkas Point	27	24	44	24	192	71	0	0	0	0
St. Mary's	108	43	328	374	932	749	0	0	0	0
Pilot Station	96	40	476	385	169	100	0	0	2	2
Marshall	71	29	221	249	1,060	1,038	0	0	0	0
DISTRICT 2	*457*	*176*	*1,416*	*787*	*4,133*	*2,307*	*0*	*0*	*165*	*270*
Russian Mission	59	22	125	88	31	36	24	28	0	0
Holy Cross	82	29	429	274	10	15	261	291	0	0
DISTRICT 3	*141*	*51*	*554*	*288*	*41*	*39*	*285*	*293*	*0*	*0*
Anvik	39	18	108	91	55	56	50	66	0	0
Grayling	54	34	292	146	2,385	3,196	372	244	56	0
Kaltag	53	26	174	140	33	17	139	67	33	14
Nulato	95	29	505	272	12	16	164	227	7	10
Koyukuk	43	19	41	30	0	0	102	98	0	0
Galena	176	45	265	219	0	0	463	564	13	22
Ruby	87	25	202	162	333	41	51	87	0	0
Shageluk	40	27	70	60	225	166	0	0	0	0
Huslia	71	29	64	27	686	150	0	0	0	0
Hughes	19	19	9	0	115	0	25	0	0	0
Allakaket	43	27	36	29	49	19	17	15	0	0
Alatna	11	10	2	1	23	13	0	0	0	0
Bettles	33	30	4	2	6	0	0	0	0	0
DISTRICT 4	*764*	*338*	*1,772*	*452*	*3,922*	*3,205*	*1,383*	*675*	*109*	*28*
Tanana	134	37	385	317	206	213	83	124	0	0
Rampart	27	23	18	5	0	0	352	164	0	0
Stevens Village	33	26	77	17	0	1	183	130	0	0
Birch Creek	19	10	0	0	0	0	0	0	0	0
Beaver	33	22	155	81	0	0	0	0	0	0
Fort Yukon	228	42	563	268	1,662	2,849	969	1,702	0	0
Venetie	70	16	2	1	0	0	0	0	0	0
Chalkyitsik	34	19	17	16	0	0	0	0	0	0
DISTRICT 5	*578*	*195*	*1,217*	*424*	*1,868*	*2,857*	*1,587*	*1,719*	*0*	*0*
Survey Totals	2,581	977	5,765	1,119	24,610	7,465	3,292	1,870	295	273

Appendix Table A.11. Estimated number of salmon given away by ADF&G to subsistence households and corresponding confidence intervals for Yukon Area surveyed villages; households contacted indicates households with complete information regarding salmon received from ADF&G, 1993.

Community	Catch Strata Combined		Chinook Salmon		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon	
	Total Households	Households Contacted	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)	Estimated Total	CI(95%) (+/-)
Hooper Bay	140	42	0	0	0	0	0	0	0	0
Scammon Bay	90	26	0	0	0	0	0	0	0	0
Sheldon's Point	30	27	0	0	15	13	15	7	0	0
Alakanuk	122	35	0	0	0	0	0	0	0	0
Emmonak	156	50	376	222	3,017	1,239	377	527	0	0
Kotlik	103	36	377	349	506	186	370	199	116	189
DISTRICT 1	*641*	*216*	*753*	*414*	*3,538*	*1,253*	*762*	*564*	*116*	*189*
Mountain Village	155	40	0	0	0	0	0	0	0	0
Pitkas Point	27	24	0	0	0	0	0	0	0	0
St. Mary's	108	43	111	185	0	0	0	0	0	0
Pilot Station	96	40	231	162	751	623	56	66	36	59
Marshall	71	29	0	0	0	0	0	0	0	0
DISTRICT 2	*457*	*176*	*342*	*247*	*751*	*623*	*56*	*66*	*36*	*59*
Russian Mission	59	22	0	0	0	0	0	0	0	0
Holy Cross	82	29	0	0	0	0	0	0	0	0
DISTRICT 3	*141*	*51*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Anvik	39	18	0	0	0	0	0	0	0	0
Grayling	54	34	0	0	0	0	500	0	0	0
Kaltag	53	26	0	0	0	0	0	0	0	0
Nulato	95	29	0	0	0	0	0	0	0	0
Koyukuk	43	19	0	0	0	0	0	0	0	0
Galena	176	45	0	0	0	0	0	0	0	0
Ruby a	87	25	0	0	0	0	1,552	675	0	0
Shageluk	40	27	0	0	0	0	0	0	0	0
Huslia	71	29	0	0	0	0	0	0	0	0
Hughes	19	19	0	0	0	0	0	0	0	0
Allakaket	43	27	0	0	0	0	0	0	0	0
Alatna	11	10	0	0	0	0	0	0	0	0
Bettles	33	30	0	0	0	0	0	0	0	0
DISTRICT 4	*764*	*338*	*0*	*0*	*0*	*0*	*2,052*	*675*	*0*	*0*
Tanana b	134	37	0	0	0	0	2,362	535	0	0
Rampart	27	23	0	0	0	0	0	0	0	0
Stevens Village	33	26	0	0	0	0	0	0	0	0
Birch Creek	19	10	0	0	0	0	0	0	0	0
Beaver c	33	21	0	0	0	0	1,613	693	0	0
Fort Yukon	228	42	0	0	0	0	0	0	0	0
Venetie	70	16	0	0	0	0	60	40	0	0
Chalkyitsik d	34	19	0	0	0	0	1,760	350	0	0
DISTRICT 5	*578*	*194*	*0*	*0*	*0*	*0*	*5,795*	*944*	*0*	*0*
Survey Totals	2,581	975	1,095	482	4,289	1,399	8,665	1,293	152	198

a Based on pounds of fish delivered, an estimated 1,789 chum and 326 pink salmon were airlifted in a state funded relief effort.

b Based on pounds of fish delivered, an estimated 4,164 chum and 236 pink salmon were airlifted in a state funded relief effort.

c Based on pounds of fish delivered, an estimated 1,180 chum and 502 pink salmon were airlifted in a state funded relief effort.

d Based on pounds of fish delivered, an estimated 945 chum and 401 pink salmon were airlifted in a state funded relief effort.

Appendix Table A.12. Summary of responses of surveyed individuals who said their household subsistence needs were not met in 1993 and answered the question "Why didn't you meet your salmon needs this year?"

VILLAGE	CATEGORY [a]	RESPONSE
Alakanuk	7	Not enough silvers in the river.
Alakanuk	2	Too busy working, and hunting for seal.
Alakanuk	2	Too busy working. Subsistence schedule conflicted with work.
Alakanuk	7	Not enough fish in the river.
Alakanuk	8	Spent the summer out of state.
Alakanuk	7	Subsistence fishing was poor. Not enough fish in the river.
Alakanuk	2	Too busy working.
Alakanuk	7	No fish in the river at the time of subsistence openings.
Alakanuk	3	Motor problems and not enough money for gas.
Alakanuk	7	Not enough fish in the river.
Alakanuk	2	Too busy working at school, not enough fishing time.
Alakanuk	3	No net.
Alakanuk	6	Too old to fish.
Alakanuk	10	Didn't fish enough.
Alakanuk	3	No boat, motor, gear.
Alatna	7	No fish in the river.
Alatna	7	Cutoff fishing downriver, not getting enough up here. Very Mad.
Alatna	10	Not enough caught.
Alatna	3	Don't have a net.
Alatna	7	Bum fishing. Got skunked could not fish due to closure in fall.
Alatna	7	No fish to catch. High water poor fishing.
Alatna	1	Too high water. Bad fishing.
Alatna	3	No net.
Allakaket	1	Too high water. Usually go fishing.
Allakaket	1	Too high water, not enough fish.
Allakaket	13	Subsistence fishing closure prevented fishing for silvers.
Allakaket	6	Had surgery. Too high water. Worried about writing down fish caught on closed days in July. Not sure of schedule in this area.
Allakaket	1	River was too high.
Allakaket	6	Too old to fish. Will get buy.
Allakaket	13	Fishing closed & high water, usually get fish from parents.
Allakaket	7	Few salmon, too high water.
Allakaket	1	Too high water, too few fish. Usually get 800 dog salmon. Will fish for whitefish. To wet this Aug-Sept for drying fish. Bad fishing year. Got no fish from state.
Allakaket	3	No motor.
Allakaket	10	Didn't stay out long enough.
Allakaket	11	To sad to fish, wife died this summer.
Allakaket	3	Didn't go fishing this year. No motor. Too high water.
Allakaket	7	Bum fishing, Too high water. Few salmon of all species.
Allakaket	1	Too high water, catch debris not fish.
Allakaket	7	Not enough in the river.
Allakaket	3	Don't have a net.
Anvik	2	Working.
Anvik	14	Didn't go fishing.
Anvik	3	Shut off to early on fall chums.
Anvik	3	Closed to fish and other people didn't get enough to share.

-Continued-

Appendix Table A.12. (Page 2 of 13)

VILLAGE	CATEGORY [a]	RESPONSE
Anvik	13	Short and late commercial season and subsistence closure in September. Not enough for dogs. Will feed commercial. Got 1/3 of needs for dogs.
Anvik	6	Nobody gives me fish and I can't go get it.
Anvik	13	Subsistence closure this fall. Needs 2500 for dogs. Does not get fish from commercial fishes himself.
Anvik	11	Gave away all commercial dog salmon.
Anvik	14	Didn't go fishing and no one gave us fish.
Anvik	10	For eating yes, but not enough to feed the dogs, had to buy commercial.
Anvik	4	Didn't have any help.
Anvik	5	Didn't have chance to go out, usually get fish from commercial openings, needs about 1620 to feed dogs.
Beaver	7	False pass fishing is impacting the chums on the Yukon.
Beaver	3	Short of fish this year because no net this year.
Beaver	13	ADF&G closure - might have to shoot dogs. Usually gets a few chums form friends to feed the dogs.
Beaver	13	ADF&G closure - normally likes to get about 600 dry chums will use rabbits and squirrels to feed dogs. With out Fly-in-Fish would have shot dogs, still might.
Beaver	13	ADF&G closure - He had to give away 6 dogs because of no chums to feed them. Likes to get about 1000 chums each year mostly for dog food.
Beaver	13	ADF&G closure - usually gets 300 chums for drying dog food. Will have to buy Friskies.
Beaver	13	ADF&G closure - normally get 2000 fish for dogs. Fishes for chums not kings. Airlift fish are poor quality - no nutrition - tried to unload dogs but everyone is hunting. Its gonna be a tough winter. Hope to feed carcasses if trapping is good.
Beaver	13	ADF&G closure caused people to be less free with giving out fish. Would have liked some silvers.
Beaver	13	ADF&G closure - we are law abiding people and did not fish during the closure. Fly-in-Fish were very poor quality- no fat. Seals on St. Paul Island are killing the chums bound for Yukon River.
Beaver	13	ADF&G closure needs about 50 eating chums - will try to get rabbits & grouse to substitute. Still trying to get a moose.
Beaver	2	Worked in Fairbanks all summer. Usually gets kings but employment kept him from fishing.
Beaver	6	Leg injury (June 92) has kept him from fishing. Maybe fish '94.
Beaver	6	BAD HAND, BONE CANCER and ADF&G closure. Kings were all too small. Chum closure caused everyone to be short of fish. Fly-in-Fish won't last more than 2 more months.
Beaver	13	ADF&G closure - Got enough "eating fish" but needed 40 chums for trapping bait will have to use rabbits.
Bettles	1	Too high water, wife busy working.
Bettles	15	Only a few available from Rampart. (To be given away or bought, source is Rampart.)
Bettles	11	Live in wrong area to catch salmon.
Bettles	2	Never can get away from work.
Bettles	1	Over amount of rain caused extreme high water to much wood drift.
Bettles	1	High water took away net. Water too high all summer. No eddy.
Bettles	2	Busy working.
Birch Creek	6	Elderly - can't fish anymore.
Birch Creek	5	Would like too - but busy with the store.

-Continued-

Appendix Table A.12. (Page 3 of 13)

VILLAGE	CATEGORY [a]	RESPONSE
Birch Creek	14	Didn't fish.
Birch Creek	14	Didn't go fishing.
Birch Creek	3	Didn't fish this summer, house burned down and all his fishing gear and everything is gone.
Birch Creek	5	No time.
Birch Creek	3	Problem with boat and motor.
Birch Creek	5	Planned - but didn't go.
Birch Creek	14	Didn't fish.
Chalkyitsik	1	High Water.
Chalkyitsik	13	Usually gets 20-30 salmon to eat. But ADF&G cut us off this year.
Chalkyitsik	1	High water - Too much drift wood.
Chalkyitsik	13	Needs more salmon for his dogs. He pulled his net out when he heard of the closure.
Chalkyitsik	15	Sister in Fort Yukon usually sends dry fish (kings) but not this year.
Chalkyitsik	15	But I like it when someone offers me salmon to eat.
Chalkyitsik	1	Water to high. Had three fish nets in the river, but too much drift wood.
Emmonak	14	Didn't go fishing.
Emmonak	3	No boat, motor, or smoke house.
Emmonak	13	Subsistence closed.
Emmonak	5	Not enough time to go fishing.
Emmonak	11	Started fishing late.
Emmonak	4	No fisherman for household.
Emmonak	14	Just didn't go, maybe next year.
Emmonak	6	Has been ill.
Emmonak	11	Don't know.
Emmonak	13	Fish and Game closed the fall season, didn't put any up.
Emmonak	3	Total loss commercial, not enough money for gas.
Emmonak	3	No net, no boat.
Emmonak	6	Disabled.
Emmonak	5	Too busy.
Emmonak	5	Busy doing other things.
Emmonak	4	Couldn't cut fish.
Emmonak	2	Too busy commercial fishing and working.
Emmonak	3	No motor.
Emmonak	3	No net.
Emmonak	6	Elder, can't fish by herself.
Emmonak	3	No motor.
Emmonak	2	Working, lazy, no time.
Fort Yukon	3	Because he took the summer off from fishing but had built a new wheel. Usually gets dog salmon from Anvik.
Fort Yukon	11	I love fish, I can eat it every day.
Fort Yukon	13	Because of closure of salmon season.
Fort Yukon	11	If only I know how.
Fort Yukon	13	Quit fishing with closure.
Fort Yukon	2	No time to fish - needed more than 25 kings but work schedule cut into fishing.
Fort Yukon	11	We tried all summer but unable to find a good location.
Fort Yukon	13	ADF&G closure - usually get 400-500 chums. Will have to buy commercial food this year. Poorest king run he's seen in years - no big ones, all small.

-Continued-

Appendix Table A.12. (Page 4 of 13)

VILLAGE	CATEGORY [a]	RESPONSE
Fort Yukon	13	Need 1200 chum will have to get beaver, rabbits, & Friskies. ADF&G closure left him real short this year. Good run of kings, and summer chum & sheefish but with closure pulled gear.
Fort Yukon	13	No fishing - Period.
Fort Yukon	3	Equipment problems.
Fort Yukon	14	Didn't fish.
Fort Yukon	7	No fish in the river.
Fort Yukon	13	ADF&G closure - needs 500-600 chums a year. 25 fall chum for table use in '93.
Fort Yukon	13	ADF&G closure - usually gets 800 dog salmon each year. No fish to feed dogs this year. King run was satisfactory but his catch was lower than usual due to gear problems.
Fort Yukon	5	No time this year.
Fort Yukon	14	Didn't fish.
Fort Yukon	1	Channel changed - need new location.
Fort Yukon	14	Next Year.
Fort Yukon	11	150 of the king salmon were jacks, and were given away for dog food.
Fort Yukon	2	Didn't fish, working.
Fort Yukon	11	Shared most of it unable to process our fish. - Pickle - Smoked.
Fort Yukon	7	Poor king run - we are short of smoked fish. Closure left us short of chums also, usually gets about 500 chum. Had to give away dogs due to food shortage. Last year was bad too, spent $3200 on commercial food. Two years bad is tough.
Fort Yukon	11	Moved to new location - made a mistake - moving from good location.
Fort Yukon	3	No equipment.
Fort Yukon	7	Not enough - low run. Buys dog food.
Fort Yukon	2	I worked all summer being a helper. But at the end of season I didn't get any dry fish.
Galena	13	Due to subsistence closures and poor weather conditions when able to fish.
Galena	2	No time, been working. Would like to see subsistence have more fishing time.
Galena	10	Ok for kings, not enough for silvers, wanted enough for jarred strips.
Galena	6	Wife had health problems and they had to spend much of August and September in Fairbanks.
Galena	13	Tired of dealing with Fish and Game, not enough commercial fishing time. Considering selling commercial permit. Got a raise at work.
Galena	5	No time to get out, usually drift for kings.
Galena	13	Had planed on fishing for silvers but ADF&G closed it. There were a lot of silvers in river when season closed.
Galena	13	Silver season was limited then closed. Would have caught 50 silvers. Have enough kings to make up for it. People catching kings up the Koyukuk River didn't use to.
Galena	3	Dads smoke house burned down this summer but got more moose.
Galena	13	Had not started before closer, it was a mistake to plan on fall chums, lots of wind in August, made fishing then more dangerous.
Galena	2	Busy working, will buy more salmon.
Galena	9	Had to purchase salmon to get enough.
Galena	2	Didn't go fishing, other employment.
Galena	1	When it was time to fish, water too high & too much drift, working.
Galena	5	Didn't have time to fish.
Galena	5	We didn't get out early enough for kings.
Galena	13	Would have fished fall chum more, but was closed.
Galena	13	Early closure plus bad weather before restrictions and closure. Winds and Rains.
Galena	13	No jared, no frozen for baking or frying. Season closure, went moose hunting instead. Short 30 eating fish.

-Continued-

Appendix Table A.12. (Page 5 of 13)

VILLAGE	CATEGORY [a]	RESPONSE
Galena	1	Didn't fish cause of weather. Husband gone and no one else to help.
Galena	13	Closure, could have gotten more, commercial fishing closed so couldn't pick out good ones. Smokehouse empty. 5 year old fish wheel is broken.
Galena	11	Usually get more, didn't bother this summer because didn't think she was going to stay the winter in Galena.
Galena	15	Nobody got fish this year. People usually share fish.
Galena	13	Fishing closures during fall chum run. Had counted on fishing then.
Galena	2	Working full time.
Grayling	11	Wants laws changed to allow drifting for kings.
Grayling	13	Closure of fall chum fishery. Lots of fall chum running during closure.
Grayling	13	Fall chum fishing was closed. Fishery above Anvik River should be managed separately from below.
Grayling	13	Short commercial season, didn't fish for dog salmon before commercial season.
Grayling	11	Didn't hardly fish this year.
Grayling	13	Not enough fishing time this fall, shut down no dog fish. Will have to feed commercial food.
Grayling	13	Closed fall chum silver.
Grayling	13	Season was closed for too long.
Grayling	13	Didn't go fishing. Was going to fish when it closed.
Grayling	4	No one to fish for her. Didn't fish fall chum due to closure. Commercial Fishermen didn't give her dog salmon this year. Someone unplugged freezer and ruined fish for dogs. Not sure how she will make it. Crows eating in town because there is no fish in the creeks.
Grayling	13	Not enough open season. Others catch too much in the ocean.
Grayling	11	Left 300 commercial summer chum salmon for residents of Grayling.
Grayling	11	Want more fish flown into feed dogs. Didn't fish for dog salmon before commercial season started.
Grayling	2	Works.
Grayling	2	Busy working.
Grayling	8	Away all summer didn't fish.
Grayling	9	Will try to buy 15 bales of commercial dog salmon. Short commercial season, not enough dried fish available. Would have fished fall chum if not for closure.
Grayling	13	Short commercial season. No point in subsistence fishing if you can't sell the eggs. Pilot Station sonar not accurate. Shouldn't use Anvik River sonar to manage 4A chum fishing. Missed good summer chum run went by. Many caught by king salmon fishermen.
Grayling	2	Busy working, boat problems.
Grayling	7	Not enough for dogs. Chum not abundant.
Grayling	14	Didn't fish.
Grayling	13	Started subsistence fishing late, because Fish & Game started commercial fishing late.
Grayling	11	Didn't fish that much.
Grayling	13	Because of closure of subsistence fishing.
Grayling	3	Didn't have working motor.
Holy Cross	13	Closed subsistence not enough time.
Holy Cross	5	Not enough time too fish, too busy.
Holy Cross	14	Didn't try.
Holy Cross	5	Too busy with commercial season.
Holy Cross	13	Closed subsistence.
Holy Cross	2	Busy working.
Holy Cross	13	Times were not good enough for subsistence.

-Continued-

Appendix Table A.12. (Page 6 of 13)

VILLAGE	CATEGORY [a]	RESPONSE
Holy Cross	13	Subsistence closed.
Holy Cross	14	Did not fish this year.
Holy Cross	1	Bad weather, not enough chum salmon.
Holy Cross	2	Working.
Hooper Bay	3	No motor.
Hooper Bay	6	Medical problem.
Hooper Bay	8	In jail.
Hooper Bay	3	No net.
Hooper Bay	7	Not enough fish in the river.
Hooper Bay	10	Three families are using the fish.
Hooper Bay	1	Flood took away net and fish racks.
Hughes	1	Too high water all summer. No eddies this year.
Hughes	7	Not abundant this year.
Hughes	5	Never got around to it. Works at school.
Hughes	11	Got his fish from the Kuskokwim.
Hughes	13	Why do they close us down when we get hardly any fish up here?
Hughes	9	Just returned from funeral in Tanana. Buys strips.
Hughes	1	Too high water. Few fish in the river.
Hughes	2	Busy working.
Hughes	14	Didn't fish.
Hughes	3	Don't have boat to set net. Also can't understand fishing schedules, don't want to get in trouble for fishing at the wrong time. Leave us alone, we just get leftovers of the fish run and just catch enough to eat.
Hughes	7	Very few coho (Red salmon). Leave us alone up here. We don't need fish laws. Don't sell fish up here, just get what we need. Buy strips.
Huslia	15	No commercial dog fish available. Usually get 1000 dog salmon.
Huslia	9	Will have to buy more, especially silvers, fishing closed during silvers.
Huslia	10	Only 2 female dog salmon caught this year. Egg fishing really buggers us up.
Huslia	2	Didn't fish enough, busy working. Would have fished this fall, but closed.
Huslia	5	No time to fish.
Huslia	11	Didn't stay in camp long enough.
Huslia	7	Couldn't catch kings, wrong time or wrong place. Fishing for eggs may be killing off chum runs. Only 5 females in 65 males caught this year. Others have noticed same high male ratio.
Huslia	7	No fish in the river.
Huslia	3	Didn't have a net out, no money to buy new nets.
Huslia	2	Away working. Might have to get rid of dogs. Son said that he bought 500 dog salmon.
Huslia	2	No time to fish, busy working.
Huslia	3	No boat. Working.
Huslia	6	Too old to fish for themselves.
Kaltag	3	Motor broke down, didn't fish silvers.
Kaltag	13	Closed during the fall, both working. Got whole moose instead of usual 1/2.
Kaltag	13	Cut off season fast. Dad will probably fish under the ice net to get whitefish.
Kaltag	12	Kings yes, didn't go out fishing for chum - will put net in under the ice. Be stricter with guys on high seas Russians and Japs.
Kaltag	1	First fall openings were real bad weather, then shut down, low summer commercial did not allow fall subsistence activities. -Working odd jobs to meet needs.
Kaltag	13	Not able to because of the fishing time. Helped another family fish.

-Continued-

VILLAGE	CATEGORY [a]	RESPONSE
Kaltag	7	Fish weren't here I guess, when commercial was over, too busy working. Plans to put under ice net to catch whitefish.
Kaltag	7	Cause fish run wasn't that good.
Kaltag	10	Not enough dog fish.
Kaltag	1	Bad weather, closed fall season, will fish under the ice for whitefish.
Kaltag	7	Too much influence at False Pass fishery. They must conserve, too.
Kaltag	15	No dog salmon available this year to feed dogs.
Kaltag	2	Kings yes, didn't fish for chums, working.
Kaltag	1	Poor weather early this fall season, and subsistence closure this fall, other jobs.
Kaltag	3	Not the silvers, because didn't have drift net - have net in now, use whitefish, lush, and sheefish.
Kaltag	12	Not enough commercial time to get dog food, will put in under ice net.
Kaltag	13	Season closed for silvers, will fish whitefish net under the ice.
Kotlik	3	No gear.
Kotlik	5	Busy fixing house.
Kotlik	5	Too busy to fish.
Kotlik	13	Subsistence closed early.
Kotlik	13	Because of new subsistence fishing laws.
Kotlik	5	Never fished that much.
Kotlik	11	Personal reasons.
Kotlik	8	Out of village, unable to fish.
Kotlik	3	No motor.
Kotlik	13	Not enough subsistence time.
Koyukuk	3	Someone took his set net site.
Koyukuk	3	Don't have boat or gear.
Koyukuk	3	No boat, net, motor. Busy with 3 kids.
Koyukuk	13	Didn't catch enough fall chum due to closure of subsistence fishing. Still fishing for whitefish. Will get by with what they have.
Koyukuk	13	Closed too much for silver fishing. Usually get kings from husband's commercial catch, but too short commercial season.
Koyukuk	3	No boat or equipment, no one to fish.
Koyukuk	7	Started fishing mid August. No fish when fishing was open, then fishing was closed in September, when there were fish.
Koyukuk	13	Because they closed off fishing. "What are you trying to make me say" Is that what the Deputy Commissioner wants to hear that I didn't get enough fish to feed my family?"
Koyukuk	10	Because of using the fish. Had to feed people when mother was ill and for potlatch after mother died. No whitefish net owned.
Koyukuk	2	Busy working.
Koyukuk	11	Didn't have a spot to fish in.
Koyukuk	11	"They ought to cut the whole thing off". Mad at dog mushers who feed lots of fall chum to their racing teams.
Koyukuk	13	Limited silver fishing time. Pregnant during king fishing. Commercial fishing has messed up subsistence fishing.
Koyukuk	2	Didn't want to fish, busy at work.
Koyukuk	14	Didn't fish.
Marshall	1	Too much rain.
Marshall	13	Subsistence closed.
Marshall	14	Don't subsistence fish.
Marshall	14	Do not fish.

-Continued-

Appendix Table A.12. (Page 8 of 13)

VILLAGE	CATEGORY [a]	RESPONSE
Marshall	14	Did not fish this year.
Marshall	1	Rained too much.
Marshall	3	No net.
Marshall	13	Subsistence closed.
Marshall	4	No one to fish for her.
Marshall	13	Subsistence closed.
Marshall	13	Subsistence closed.
Marshall	13	Subsistence closed.
Marshall	13	Subsistence closed.
Marshall	5	Too busy.
Marshall	13	Subsistence closed.
Marshall	13	Subsistence closed.
Marshall	3	No net.
Marshall	2	Too busy working.
Marshall	5	Too busy with children.
Marshall	13	Subsistence closed.
Marshall	13	Subsistence closed.
Marshall	6	Dislocated hip.
Marshall	13	Subsistence closed.
Mtn Village	5	Too busy to fish.
Mtn Village	14	Don't fish.
Mtn Village	7	Not enough fish in the river.
Mtn Village	2	Too busy working.
Mtn Village	10	Son did not fish after the kings were caught.
Mtn Village	6	Wife was at hospital.
Mtn Village	10	Household too big.
Mtn Village	2	Too busy working.
Mtn Village	1	Rough weather.
Mtn Village	3	Can't afford to go out fishing anymore.
Mtn Village	7	King were not abundant.
Mtn Village	2	Son was working.
Mtn Village	7	Not enough fish in the river during subsistence openings.
Mtn Village	5	Too busy.
Mtn Village	7	No fish in the river.
Mtn Village	6	Sick family member.
Mtn Village	10	Didn't fish for fall chum.
Mtn Village	13	Not enough subsistence fishing time.
Mtn Village	13	Closed subsistence.
Mtn Village	6	Death in the family.
Mtn Village	3	No boat.
Mtn Village	2	Too busy working.
Nulato	2	Husband was working, so didn't go fishing this year.
Nulato	13	Smokehouse empty. No silvers due to closure too many rules.
Nulato	7	Not enough fish and limited fishing time during silvers, closure. Some sockeye salmon this year.
Nulato	3	Didn't have boat, couldn't fish until late. Death in the family.
Nulato	6	Death in the family.
Nulato	3	Don't have boat or net.
Nulato	6	Didn't go out, elderly, wife not well and she couldn't cut fish.

-Continued-

VILLAGE	CATEGORY [a]	RESPONSE
Nulato	13	Short commercial season, didn't put up enough dog fish, will have to buy white man's dog food.
Nulato	10	Lots of fall chum little effort needed to catch silvers.
Nulato	11	Too much tragedy in town this summer (deaths).
Nulato	11	Didn't fish for fall chum due to village tragedies.
Nulato	7	Kings best in 7 years good net site, fall chums not as good as other years. Drift net season opened too late.
Nulato	2	No commercial dog fish available. Busy working, conflicts with fishing schedule, fall chum closure.
Nulato	13	Kings okay, not enough fall chum - too much law.
Nulato	13	Mad about short commercial season left fish camp.
Pilot Station	11	No room in freezer.
Pilot Station	7	No fish in the river.
Pilot Station	2	Too busy working.
Pilot Station	14	Did not feel like fishing any more.
Pilot Station	2	Busy working.
Pilot Station	3	No gear.
Pilot Station	2	Too busy commercial fishing.
Pilot Station	2	Too busy working.
Pilot Station	1	Rained too much during the season.
Pilot Station	6	Too old to fish.
Pilot Station	4	Mother could not cut fish.
Pilot Station	2	Too busy working.
Pilot Station	13	Because of subsistence closure.
Pilot Station	1	Rained too much.
Pilot Station	3	No gear.
Pilot Station	13	Closed subsistence too early.
Pilot Station	3	Motor problems.
Pilot Station	13	Subsistence fishing was closed.
Pilot Station	3	No smoke house.
Pilot Station	13	Not enough subsistence openings.
Pilot Station	8	Leaves during the summer.
Pilot Station	6	Elder, no fishing.
Pilot Station	3	No gear.
Pilot Station	4	No one to cut fish.
Pilot Station	6	Health problems.
Pitka's Point	3	No king salmon net, usually fish for fall chum.
Pitka's Point	6	Old age, and no boat.
Pitka's Point	6	Too old to fish, nobody to fish for him.
Pitka's Point	1	Rained too much during subsistence season.
Pitka's Point	4	Son didn't fish.
Pitka's Point	14	Didn't fish for them this year.
Pitka's Point	6	Medical reasons.
Pitka's Point	6	Too old to fish.
Rampart	10	Out of kings, only have 15 lbs left and winter has only started. Could use more kings to share with family.
Rampart	13	Needed to fish more in August and September.
Rampart	11	Will have to feed dogs commercial food.
Rampart	13	Because they shut us down this year.

-Continued-

VILLAGE	CATEGORY [a]	RESPONSE
Rampart	13	They shut us off, usually get that fall fish but this year got none.
Rampart	10	Usually get a little more wanted to get green salmon.
Rampart	11	Don't have enough fish for winter.
Rampart	13	Because of closure. Returned from summer work in Fairbanks in August. Usually get silvers for eating fish. Sort through to get the best ones.
Rampart	11	Had built walk in freezer got scraps to feed. 10 fish a day plus scraps. Rare to get as many sheefish in fall in wheel.
Rampart	13	Would have liked to put up some fall chum.
Rampart	11	Doesn't monkey around king salmon. Didn't have good place to dry kings.
Rampart	13	People didn't fish long enough because of the closure.
Rampart	10	Kings yes, silvers no.
Rampart	2	Could have used more but busy with work so didn't fish.
Ruby	2	Wasn't here. Working at gold mine. Away all summer.
Ruby	13	Subsistence closure.
Ruby	13	Subsistence closure.
Ruby	10	Eddy didn't produce as many kings as before.
Ruby	13	Subsistence closure.
Ruby	11	If he got a deep freezer would put up more.
Ruby	13	Subsistence closure.
Ruby	13	Not enough time and poor run.
Ruby	13	Not enough fishing time - subsistence closure.
Ruby	13	Subsistence closure - short supply - usually people give me fish when they have enough.
Ruby	13	Subsistence closure.
Ruby	13	Subsistence closure. Usually get 2000 fish for dogs, 7/day + commercial (dry) feed.
Ruby	3	No boat.
Ruby	13	Subsistence closure.
Russian Mission	13	Subsistence closed.
Russian Mission	6	Medical reasons.
Russian Mission	1	Too much rain.
Russian Mission	13	Subsistence closed.
Russian Mission	13	Subsistence closed.
Russian Mission	13	Subsistence closed.
Russian Mission	14	Did not fish.
Russian Mission	13	Subsistence closed.
Russian Mission	3	No Motor.
Russian Mission	14	Don't fish.
Russian Mission	14	Does not fish.
Russian Mission	13	Subsistence closed.
Russian Mission	13	Subsistence closed.
Scammon Bay	6	Too sick during the summer and fall season.
Scammon Bay	7	No fish in the river.
Scammon Bay	3	Motor problems.
Scammon Bay	7	Not enough fish in the river.
Scammon Bay	8	Could not fish, family was at Black River for the summer.
Scammon Bay	4	Wife had a child, could not cut more fish.
Scammon Bay	2	Too busy working.
Scammon Bay	11	Will give some fish to relatives.
Scammon Bay	6	Too old to fish.
Scammon Bay	2	Too busy working.

-Continued-

Appendix Table A.12. (Page 11 of 13)

VILLAGE	CATEGORY [a]	RESPONSE
Scammon Bay	7	Not enough fish in the river.
Scammon Bay	14	Did not want to subsistence fish.
Scammon Bay	6	Elder.
Scammon Bay	2	Too busy working.
Shageluk	13	Because subsistence closed early.
Shageluk	3	Doesn't have net, boat, or motor.
Shageluk	11	No place to store fish.
Shageluk	11	Bum season on fishing. Fish they did get in smoke house was covered in thick mold spoiled do to moisture.
Shageluk	5	Started to late.
Shageluk	3	No motor.
Shageluk	10	Didn't fish enough.
Shageluk	2	Working, no time to check net.
Shageluk	6	Sick, went to Anchorage.
Shageluk	3	Didn't have a net.
Sheldon's Point	13	Subsistence fishing closed too early.
Sheldon's Point	13	Because subsistence fishing is closed now.
Sheldon's Point	3	Didn't have a motor.
Sheldon's Point	13	Subsistence fishing was closed.
Sheldon's Point	13	Subsistence was closed too early.
Sheldon's Point	2	Both working, not enough fishing time.
Sheldon's Point	7	No fish during subsistence openings.
Sheldon's Point	2	Too busy working.
Sheldon's Point	12	Not finished fishing. Did not fish for dogs this year.
Sheldon's Point	2	Work with the National Guard, too busy to fish.
Sheldon's Point	11	Freezer too small to hold fish.
Sheldon's Point	3	No boat or motor.
Sheldon's Point	2	Working.
Sheldon's Point	14	Did not fish for subsistence.
St. Mary's	10	Did not fish much before commercial opening.
St. Mary's	1	Too much rain couldn't fish for silvers.
St. Mary's	6	Injured, couldn't fish.
St. Mary's	2	Too busy working.
St. Mary's	12	Will fish for more.
St. Mary's	4	Not enough help at fish camp.
St. Mary's	13	Subsistence closed.
St. Mary's	4	Nobody to cut fish.
St. Mary's	13	New subsistence periods to short, closed too early.
St. Mary's	2	Too busy working.
St. Mary's	3	Broken motor.
St. Mary's	2	Too busy working.
St. Mary's	3	No net.
St. Mary's	7	Not enough fish in the river, subsistence openings to restrictive.
St. Mary's	3	Motor problems.
St. Mary's	14	Don't subsistence fish.
St. Mary's	13	Bad timing on subsistence openings.
St. Mary's	7	No chums.
St. Mary's	5	Too busy working. No boat.
Stevens Village	13	Wanted to harvest silvers but couldn't because of closure.

-Continued-

VILLAGE	CATEGORY [a]	RESPONSE
Stevens Village	10	Could have used more.
Stevens Village	12	It wouldn't last us maybe fish under the ice this winter.
Stevens Village	11	Respondent was critical of local Native Council's decision to say "no" to offer of air lift fish.
Stevens Village	10	Short on eating fish and dog fish. Will buy commercial feed probably.
Stevens Village	15	Not going to last, people will share.
Stevens Village	13	Closure in August, will have to feed Friskies to the dogs.
Stevens Village	13	Would have fished. Didn't get enough fish for eating.
Stevens Village	3	No Boat. Helps other Households fish.
Stevens Village	13	Closure. Needed 500 more for eating and 500 more for dogs. Buy more store food, get rid of some dogs. Critical of trawler catch of chums, afraid of losing wild stocks. Discouraged about strength of local fishery. He said it was over the hump - too far gone now for it to come back now.
Stevens Village	15	Less fish received this year than usual.
Stevens Village	9	Had to buy 100 fish for feeding to dogs. No split fish, Have to use a net under ice to catch pike, whitefish, and lush.
Stevens Village	13	Not enough, Mad at Fish & Game for Closure.
Tanana	3	No net.
Tanana	7	Poor run & closure combined, catch mostly whitefish so closure didn't effect me as much. Other people lack usual 200 fall chum.
Tanana	13	Will have to cut back dogs, closure requiring use of 5 inch net, will fish until ice comes. Whitefish for dogs.
Tanana	13	Couldn't fish, really scraped & worked to get what I got -maybe barely enough - need another 1000 salmon. Fly-in-fish had to feed twice as much as Yukon fish.
Tanana	13	ADF&G closure.
Tanana	6	Can't get out to fish anymore, elderly, have net but no boat. Last fished about 32 years ago on North Bank 4 miles down river.
Tanana	2	Had to work in town (Tanana) at seasonal cooking job.
Tanana	13	Didn't get to put up fall chums for eating fish. Giving dogs away shipping them out. Kings were wonderful. Fly-in-Fish were good quality like Tanana chums.
Tanana	2	Not enough for dogs didn't have time due to work and closure.
Tanana	3	Couldn't fish because didn't have a net.
Tanana	13	Didn't get silvers for putting up dry fish & jared fish because of restrictions in August. Wasn't worth it to go to camp, 15 gallons round trip.
Tanana	12	He is still fishing. Good coho year - good late fishing - lots of whitefish. Cohos must spawn a long way away cause they are in good shape on North Bank.
Tanana	9	Would have liked more. Didn't get any Fly-in-Fish only white people got it. Purchased strips from locals.
Tanana	13	Partly due to closure, partly because fall chum run not very strong. Usually fishes 3 nets now only one. Still fishing for whitefish.
Tanana	13	Not enough for dogs due to closure. Fly-in-Fish were not fit for dogs.
Tanana	13	Closure in August kept him from using wheel.
Tanana	11	Wouldn't take that fish the State was giving away.
Tanana	13	Because of closure, buy chicken & meat commercially usually buy 1 ton this year 2 tons. Supports - not feeding jack chinook to dogs.
Tanana	13	ADF&G closure -He is about 1000 fish short - will have to buy commercial dog food, with a bank loan.
Tanana	10	Wanted to get more to put up some in jars.
Tanana	15	Usually people share more with household.

-Continued-

VILLAGE	CATEGORY [a]	RESPONSE
Tanana	13	Closure in September, usually get coho. Cut split for eating fish. Still has net in.
Tanana	14	No one fished in the family.
Tanana	13	Subsistence fishing closure. Gambles on late fishing every year. This year had no warning of closure. Wouldn't tell how many other species so we won't regulate them too. Won't tell who gave them fish. Had to shoot about 40 dogs. Feeding commercial food now.
Tanana	3	Needs 60 cribbed fish - lack of fishing equipment - fewer people giving fish away this year.
Venetie	2	No dogs - working and building our house.
Venetie	5	Unable to fish this year.
Venetie	1	Water too high.
Venetie	11	No good quality fish.
Venetie	5	My house burned down - I'm rebuilding a new home.
Venetie	1	Water too high.
Venetie	11	No comment.
Venetie	14	Didn't go fishing.
Venetie	11	?
Venetie	7	No or very few king salmon in Chandalar River.
Venetie	11	Personal problem.
Venetie	6	Too old.
Venetie	1	Water to high in Chandalar.
Venetie	13	No fishing.

[a]

CATEGORY	Response Summary
1	Mother Nature.
2	Another occupation.
3	No gear, boat, net, motor, gas.
4	No helper for harvest/process.
5	Busy with other things/no time.
6	Medical or elderly.
7	Poor run of fish.
8	Out of town.
9	Will buy or be given fish.
10	Not enough fish caught.
11	Miscellaneous, reasons.
12	Still fishing.
13	Department closed fishing.
14	Didn't fish/normally don't.
15	Not enough to share/barter.

Appendix Table A.13. Summary of information collected from 53 Subdistrict 4-A commercial fishermen concerning summer chum salmon caught during the 1993 commercial fishing season.

Fish Ticket Reported Number of Fish Killed	Department Estimate of Fish Killed	Throw Back Live Males? a	Method of Throw Back b	Hours Fished 21	Time Males Released c	Estimated Commercial Harvest	Household Estimated Use	Number Given Away	Number Sold	Number Loss to Spoilage/ Animals
1,654	1,624	N				1,654	0	1,654		
586	867	Y	4	21	A	600	600			
913	1,144	Y	4	21	A	913	450			463
992	1,193	Y	4	21	A	992	692	300		
1,347	1,531	Y	4	21	A	1,147	0	600		547
247	237	N				247	247			
315	470	N				378	328	50		
557	576	N				557	200	357		
23	33	N				33	33			
402	920	N				739	639	100		
854	1,180	Y	4	21	A	854	854			
1,604	1,552	N				1,600	500	900		200
348	541	Y	2	21	A	348	348			
247	254	N				247	247			
0	1,280	Y	2	21	2	1,080	580	200		300
120	185	N				120	120			
324	324	N				324	324			
306	293	N				293	293			
702	722	N				800	400	300		100
547	1,035	Y	2	21	A	665	665			
0	1,037	N				1,440	60		1,380	
386	507	N				507	225	182		100
0	548	N				548	548			
145 d	287	Y	2	21	<4	237	0	237		
794	891	Y	3	21	A	690	0		690	
0	1,017	Not contacted.								
145	246	Declined interview.								
452 d	1,007	N				1,007	0	1,007		
805	685	Declined interview.								
399	443	N				443	443			
415	472	N				472	0			
124 d	311	N				311	311			
431	702	N				702	0	702		
1,139	1,154	Y	2	21	<4	1,139	1,139			
0	315	Y	1	21	2	250	250			
0	1,696	N				1,696	1,200			496
530	522	N				530	530			
505	780	N				780	780			
445	541	Not contacted.								
0	356	N				356	0	356		
1,020	1,069	N				1,020	1,020			
766	919	N				1,000	500	500		
669	963	Y	3	21	A	669	502			167
100 d	448	N				448	0	448		
0	541	N				541	100	241		200
115 d	678	N				678	527	151		
756	761	N				761	386	375		
160	257	Y	3	9	A	160	0		160	
240 d	457	N				457	0	457		
197	333	Declined interview.								
110	113	N				113	113			
1,012	1,648	Y	2	19	A	1,100	0	900		200
85	270	N				270	30	240		
24,033	37,935					31,916	16,184	10,257	2,230	2,773

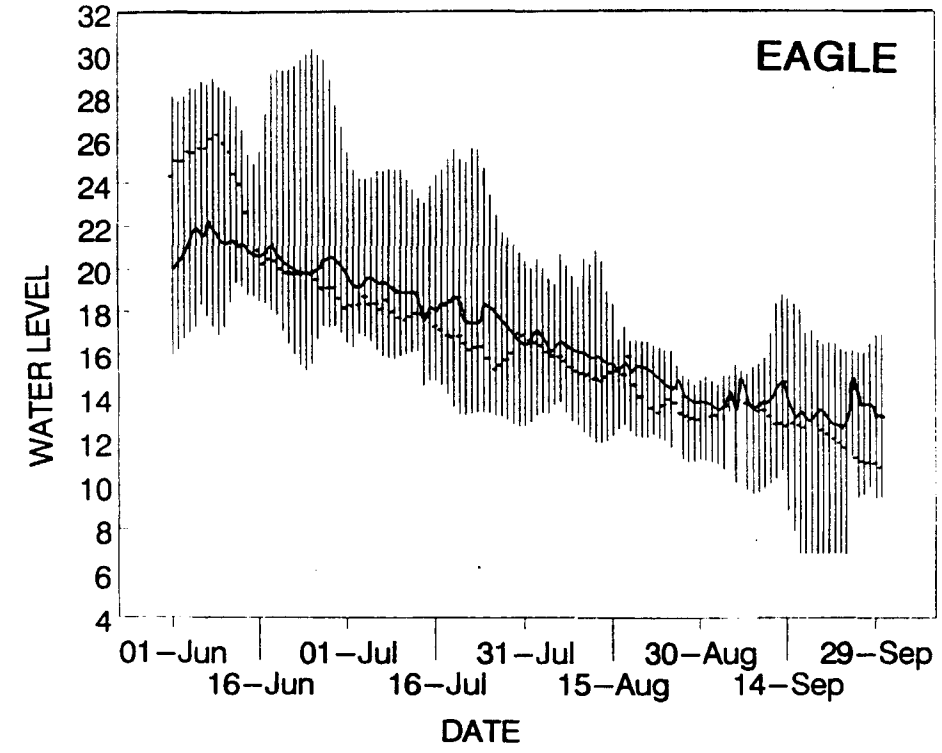
a Y=Yes, N=No

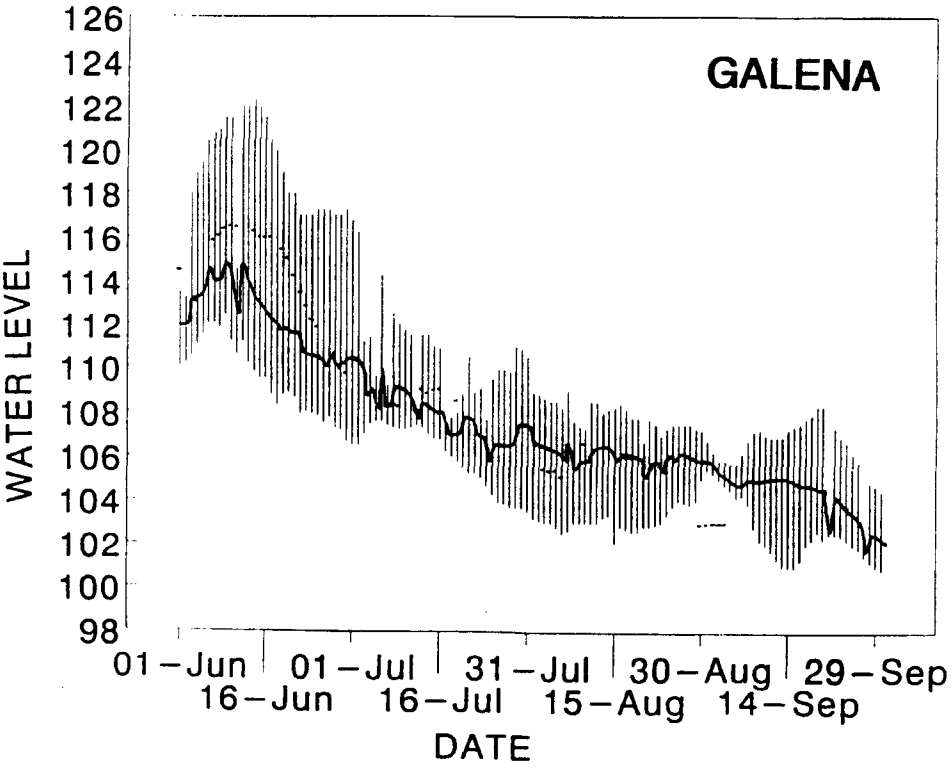
b 1= Males thrown back after they dropped into a box.
2= Males dropped directly from the wheel into the water by a chute.
3= Males held in a livebox and returned to the river using a dipnet or bucket.
4= Released live males from a set gillnet.

c Males released, A= all the time,3= 3/4 of the time, 2= 1/2 the time, 4= 1/4 of the time. and <4= less than 1/4 of the time.

d Only one period (period two) numbers of fish were reported on fish tickets.

Appendix A.14. Water levels for the Yukon River near the communities indicated. The vertical bars indicate the range of water levels recorded from 1987 to 1992. The solid horizontal line indicates the 1987 to 1992 average water level. The broken horizontal marks indicate the 1993 water level, in feet above benchmark.





APPENDIX B

YUKON RIVER DRAINAGE HISTORICAL SUBSISTENCE AND PERSONAL USE SALMON HARVESTS

Appendix Table B.1. Estimated Yukon Area chinook salmon subsistence harvest in numbers of fish by village, 1982-1993. Blanks indicate harvest information was not collected. a

Village	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1984-1988 Average	1989-1993 Average
Scammon Bay						838	489 b	2 b			948	1,199	664 c	1,074 d
Hooper Bay						2,783	1,099 b	14 b			503	230	1,941 c	367 d
Coastal District Subtotal						3,621	1,588	16			1,451	1,429	2,605	1,440
Sheldon Pt.	79	1,021	802	143	592	1,173	302	165	756	445	388	561	602	463
Alakanuk	336	1,582	1,028	517	1,027	1,180	738	820	871	1,044	623	2,562	898	1,184
Emmonak	1,328	2,436	2,099	1,382	1,754	2,518	1,786	1,598	1,873	1,311	2,336	4,372	1,908	2,298
Kotlik	568	1,224	695	1,029	1,902	2,407	1,112	1,982	3,119	3,125	1,794	2,913	1,429	2,587
Retained From Commercial												15		
Mouth to Anuk River Subtotal	2,311	6,263	4,624	3,071	5,275	7,278	3,938	4,565	6,619	5,925	5,141	10,423	4,837	6,535
Mt. Village	218	1,875	1,217	672	1,367	2,252	740	2,001	1,792	1,171	1,249	3,217	1,250	1,886
Pitkas Pt./St. Marys	985	2,432	2,663	778	1,717	2,457	1,378	2,184	2,476	2,488	2,604	3,043	1,799	2,559
Pilot Station	428	2,703	1,116	896	1,452	2,593	674	1,498	3,786	2,681	1,818	2,661	1,346	2,489
Marshall	478	2,055	2,176	1,122	1,947	2,564	1,031	1,464	1,492	1,277	1,403	2,592	1,768	1,646
Retained From Commercial												3		
Anuk River to Owl Slough Subtotal	2,109	9,065	7,172	3,468	6,483	9,866	3,823	7,147	9,546	7,617	7,074	11,516	6,162	8,579
Russian Mission	1,628	2,634	1,938	974	1,747	2,036	1,850	2,367	1,694	1,349	1,282	3,273	1,709	1,993
Holy Cross	1,731	2,276	2,456	2,368	2,505	2,625	2,593	2,379	2,337	1,649	3,491	3,191	2,509	2,609
Retained From Commercial												10		
Owl Slough to Bonasila R. Subtotal	3,359	4,910	4,394	3,342	4,252	4,661	4,443	4,746	4,031	2,998	4,773	6,474	4,218	4,198
Lower Yukon Area Total	7,779	20,238	16,190	9,881	16,010	25,426	13,792 e	16,474 e	20,196 e	16,540	18,439	29,842	17,823	20,752
Anvik	354	744	576	405	959	428	211	418	481	619	389	663	516	514
Grayling	294	951	879	903	1,837	1,322	1,571	1,082	144	874	1,074	1,045	1,302	844
Kaltag	344	652	487	669	1,080	1,117	1,168	1,306	2,244	1,866	1,084	1,260	904	1,552
Nulato	811	1,135	966	1,063	1,835	1,573	1,986	2,079	2,788	2,500	1,596	1,660	1,485	2,125
Koyukuk	493	966	1,009	194	569	609	711	1,003	876	885	510	853	618	825
Galena	735	1,477	1,226	1,329	1,046	1,270	1,982	1,374	3,134	2,574	1,870	1,732	1,371	2,137
Ruby/Kokrines	1,168	2,346	1,107	1,657	1,263	927	1,402	1,016	811	971	498	3,263	1,271	1,312
Retained From Commercial												978		
Bonasila R. to Illinois Cr. Subtotal	4,199	8,271	6,250	6,220	8,589	7,246	9,031	8,278	10,478	10,289	7,021	11,454	7,467	9,019
Shageluk *Innoko River Subtotal*					53	47	104	32	62	189	218	128	41	126
Hustia	125	459	169	144	82	182	89	177	198	198	751	232	133	311
Hughes	479	318	856	778	296	177	29	181	90	146	29	88	427	107
Allakaket/Alatna f	274	706	375	283	563	309	366	438	356	451	437	139	379	364
Bettles								0	0	16	53	1		14
Koyukuk River Subtotal	878	1,483	1,400	1,205	941	668	484	796	644	811	1,270	460	940	796
District 4 Subtotal	5,077	9,754	7,650	7,425	9,583	7,961	9,619	9,106	11,184	11,289	8,509	12,042	8,448	9,941

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Appendix Table B.1. (page 2 of 2)

Village	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1984-1988 Average	1989-1993 Average
Tanana	2,230	5,547	2,682	1,248	1,672	4,021	3,537	3,008	2,284	2,483	2,477	3,362	2,632	2,723
Rampart	887	1,070	876	1,302	1,700	2,815	3,145	3,177	1,481	988	2,802	1,956	1,968	2,081
Fairbanks (permits) g h	1,935	2,672	2,499	1,865	1,762	613 e	0 e	200 e	420 e	982	1,394	1,514	1,348	902
Stevens Village	1,810	2,531	2,177	2,763	2,839	2,076	2,845	3,101	1,295	2,035	1,887	1,754	2,540	2,014
Birch Creek							0 b	0		196	44	0	0	48
Beaver	250	220	553	506	708	466	940	1,694	721	713	1,564	1,557	635	1,250
Ft. Yukon	1,894	1,887	3,608	2,900	3,083	3,950	2,245	4,898	4,051	5,585	4,122	6,361	3,157	5,003
Circle/Central (permits) h	969	648	545	2,259	2,233	1,614	2,034	1,785	1,951	1,871	1,752	955	1,737	1,663
Eagle (permits) h	2,864	2,183	1,998	2,247	1,915	1,988	2,333	2,385	1,742	1,193	1,040	753	2,096	1,423
Other (permits) h i									615	374	571	437	0	463
Retained From Commercial												746		
Illinois Cr. to U.S. Can. Border														
Subtotal	12,839	16,758	14,938	15,090	15,912	17,543	17,079	20,248	14,560	16,420	17,653	19,395	16,112	17,569
Venetie	20	22	51		32	13	121	88	29	9	35	2,716	43	575
Chalkyitsik					0	0	0	0	0	0	3	0	0	1
Chandalar/Black Rivers														
Subtotal	20	22	51		32	13	121	88	29	9	38	2,716	43	576
District 5 Subtotal	12,859	16,780	14,989	15,090	15,944	17,556	17,200	20,336	14,589	16,429	17,691	22,111	16,156	18,231
Manley j	386	990	282	744	621	40	572	992	1,169	401	551	238	452	737
Minto j	411	275	440	1,386	350	374	466	366	100	134	142	468	603	242
Nenana j	1,195	966	2,556	4,919	2,093	3,151	3,846	1,188	1,265	1,599	1,267	693	3,313	1,833
Fairbanks (permits) h k	451	475	321	326	637	531	0 e	0 e	84 e	378	402	699 e	363	173
Other j l							0	0	0	3	76	0	0	16
Retained From Commercial												1,036		
Tanana River														
Subtotal	2,443	2,706	3,599	7,375	3,701	4,096	4,884	2,546	2,618	2,515	2,438	3,134	4,731	3,000
Upper Yukon Area Total	20,379	29,240	26,238	29,890	29,228	29,613	31,703	31,988	28,391 m	30,233 m	28,638 m	37,287 m	29,334	31,173
Alaska Yukon Area Total	28,158	49,478	42,428	39,771	45,238	55,039	45,495	48,462	48,587	46,773	47,077	67,129	47,157	51,925

a 1961-1981 data available from 1981 Yukon Area Annual Management Report. Beginning in 1988 subsistence salmon harvest estimates have been generated from a stratified random sample of village households.
b The village was not surveyed, harvest estimates were calculated from calendar and post card replies.
c 1987 and 1988 average harvest.
d 1992 and 1993 average harvest.
e Additional salmon harvest was documented under personal use salmon harvest tables.
f Alatna combined with Allakaket.
g Catches by Fairbanks subsistence permit holders that fished in District 5 of the Yukon River.
h Salmon catches expanded for permits not returned and household interviews (1981-1989). Beginning in 1990, reported harvest is from returned permits only.
i Other permit holders that fished in District 5 but did not reside in the villages listed.
j Permits required beginning in 1988 for Subdistricts 6-A and 6-B. In 1988 and 1989, permit and household interview data were expanded. Beginning in 1990, reported harvest is from returned permits only.
k Catches by Fairbanks subsistence permit holders that fished in the Tanana River. Permits required beginning in 1964 for the Tanana River upstream of the Wood River.
l Other permit holders that fished in District 6 but did not reside in the villages listed.
m Estimated chinook salmon carcasses available for subsistence use as a byproduct of the commercial fishery are documented in the total utilization tables of the Yukon Area Annual Management Report.

Appendix Table B.2. Estimated Yukon Area summer chum salmon subsistence harvest in numbers of fish by village, 1982-1993. Note: District 4 summer chum salmon subsistence harvest estimates prior to 1988 and District 5 and 6 prior to 1989 included commercially caught summer chum salmon carcasses retained for subsistence use. Beginning in 1988 and 1989, efforts were made to exclude commercial carcasses from subsistence harvest estimates. Blanks indicate harvest information was not collected. a

Village	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1984-1988 Average	1989-1993 Average
Scammon Bay						6,200	8,171 b	48 b			3,795	4,692	7,186 c	4,244 d
Hooper Bay						23,468	23,059 b	2,293 b			12,900	16,106	23,264 c	14,503 d
Coastal District Subtotal						29,668	31,230	2,341			16,695	20,798	30,449	18,747
Sheldon Pt.	885	1,690	2,701	1,717	4,755	2,460	2,589	4,314	1,458	2,226	1,415	2,362	2,844	2,355
Alakanuk	5,225	9,347	10,095	7,702	11,280	9,913	6,992	12,108	7,265	8,058	9,951	8,935	9,196	9,263
Emmonak	8,426	8,401	10,053	8,742	12,618	11,177	10,528	22,985	15,215	8,401	12,296	15,568	10,624	14,893
Kotlik	3,916	5,241	5,610	6,188	10,201	7,210	8,825	13,437	13,061	9,105	9,577	7,121	7,607	10,460
Retained From Commercial												299		
Mouth to Anuk River Subtotal	18,452	24,679	28,459	24,349	38,854	30,760	28,934	52,844	36,999	27,790	33,239	34,285	30,271	36,972
Mt. Village	3,854	10,183	8,665	6,745	11,468	12,456	9,248	15,869	9,950	4,743	7,864	10,505	9,716	9,786
Pitkas Pt./St. Marys	9,405	8,569	11,019	7,556	14,986	12,402	10,501	13,124	9,515	9,284	8,555	7,406	11,293	9,577
Pilot Station	2,135	4,683	3,236	3,133	7,870	4,279	4,242	6,783	6,698	4,634	6,236	5,641	4,552	5,998
Marshall	3,048	3,961	4,076	2,361	7,172	3,997	4,796	3,927	2,290	2,042	2,076	1,745	4,480	2,416
Retained From Commercial												120		
Anuk River to Owl Slough Subtotal	18,442	27,396	26,996	19,795	41,496	33,134	28,787	39,703	28,453	20,703	24,731	25,417	30,042	27,777
Russian Mission	1,419	1,576	2,227	1,817	3,136	2,283	2,794	2,229	2,146	837	3,331	1,838	2,451	2,076
Holy Cross	4,421	3,033	5,124	1,870	2,392	1,878	3,036	1,753	857	1,028	1,001	1,517	2,860	1,231
Retained From Commercial												21		
Owl Slough to Bonasila R. Subtotal	5,840	4,609	7,351	3,687	5,528	4,161	5,830	3,982	3,003	1,865	4,332	3,376	5,311	3,307
Lower Yukon Area Total	42,734	56,684	62,806	47,831	85,878	97,723	94,781 e	98,870 e	68,455 e	50,358	78,997	83,876	96,073	86,803
Anvik	27,087	20,592	22,433	24,950	41,581	28,887	12,607	410	2,032	876	1,142	1,735	26,092	1,239
Grayling	47,006	22,958	28,060	23,937	35,284	21,264	22,634	14,570	1,430	8,094	3,605	1,137	26,236	5,767
Kaltag	37,125	27,674	1,800	26,965	24,667	28,550	3,592	632	6,956	2,287	1,204	1,116	17,115	2,439
Nulato	19,740	11,130	232	16,315	10,349	16,299	10,201	200	502	159	889	15	10,679	353
Koyukuk	18,149	14,440	5,215	9,666	6,250	9,718	284	381	283	2,326	1,130	230	6,227	870
Galena	20,434	5,789	19,480	16,212	6,618	11,776	7,413	6,216	1,760	3,493	3,232	2,477	12,300	3,436
Ruby/Kokrines	7,539	8,804	4,282	13,556	7,883	8,786	4,010	1,844	351	1,352	2,420	1,459	7,703	1,485
Retained From Commercial														
Bonasila R. to Illinois Cr. Subtotal	177,080	111,387	81,502	131,601	132,632	125,280	60,741	24,253	13,314	18,587	13,622	8,169	106,351	15,589
Shageluk *Innoko River Subtotal*					6,710	8,015	8,779	8,842	6,518	3,680	5,267	4,183	4,701	5,698
Huslia	6,809	18,588	12,550	13,430	10,516	11,042	14,895	10,005	7,368	7,857	13,670	8,343	12,487	9,449
Hughes	8,409	1,905	14,744	12,788	7,280	4,369	2,445	3,687	509	1,257	1,625	827	8,325	1,581
Allakaket/Alatna f	7,687	4,165	4,169	7,564	8,934	8,700	8,524	2,915	5,319	7,413	6,858	2,703	7,578	5,042
Bettles								75	24	155	37	34	0	65
Koyukuk River Subtotal	22,905	24,658	31,463	33,782	26,730	24,111	25,864	16,682	13,220	16,682	22,190	11,907	28,390	16,136
District 4 Subtotal	199,985	136,045	112,965	165,383	166,072	157,406	95,384	49,777	33,052	38,949	41,079	24,259	139,442	37,423

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Appendix Table B.2. (page 2 of 2)

Village	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1984-1988 Average	1989-1993 Average
Tanana	3,214	5,552	10,620	11,148	11,646	10,876	13,972	7,756	5,905	2,779	4,553	4,245	11,652	5,048
Rampart	0	3,698	7,650	5,133	1,450	2,434	3,383	28	58	20	4,494	1,489	4,010	1,218
Fairbanks (permits) g h	2,056	2,194	4,065	2,027	1,382	1,493 e	0 e	0 e	25 e	1,068	706	465	1,793	453
Stevens Village	666	5,051	5,952	3,046	3,116	1,446	865	2,375	1,671	1,385	460	653	2,885	1,309
Beaver	534	100	167	263	0	657	214	124	108	2,355	12	134	260	547
Ft. Yukon	1,434	7,142	3,032	4,410	3,264	1,187	7,717	1,760	145	11,974	1,700	3,830	3,922	3,882
Circle/Central (permits) h	0	73	0	930	459	2,078	871	361	1,267	51	356	85	868	424
Eagle (permits) h	1,887	133	49	39	516	417	1,273	547	361	607	23	32	459	314
Other (permits) h i									187	32	291	24	0	107
Retained From Commercial												159		
Illinois Cr. to U.S. Can. Border														
Subtotal	9,791	23,943	31,535	26,996	21,833	20,588	28,295	12,951	9,727	20,271	12,595	11,116	25,849	13,300
Venetie	0	0	0		0	0	701	30	0	3,393	0	129	140	710
Chalkyitsik					0	0	327	0	90	500	17	0	65	121
Chandalar/Black Rivers														
Subtotal	0	0	0		0	0	1,028	30	90	3,893	17	129	206	832
District 5 Subtotal	9,791	23,943	31,535	26,996	21,833	20,588	29,323	12,981	9,817	24,164	12,612	11,245	26,055	14,132
Manley j	971	7,245	1,260	856	604	267	3,731	2,457	2,250	1,716	850	1,310	1,344	1,717
Minto j	808	7,414	5,042	5,291	1,587	1,383	947	1,425	500	748	625	367	2,850	733
Nenana j	3,972	6,779	13,962	15,825	10,827	21,214	5,654	3,986	1,383	1,499	6,372	5,019	13,496	3,652
Fairbanks h k	2,708	2,276	3,177	2,646	4,024	1,461	0 e	0 e	152 e	1,096	1,342	771 e	2,262	672
Other j l							0	0	0	10	315	0	0	65
Retained From Commercial												5		
Tanana River														
Subtotal	8,459	23,714	23,441	24,618	17,042	24,325	10,332	7,868	4,285	5,069	9,504	7,472	19,952	6,839
Upper Yukon Area Total	218,235 m	183,702 m	167,941 m	216,997 m	204,947 m	202,319 m	135,039 m	70,626 m	47,154 m	68,182 m	63,195 m	42,976 m	185,449	58,394
Alaska Yukon Area Total	260,969	240,386	230,747	264,828	290,825	300,042	229,820	169,496	115,609	118,540	142,192	126,852	281,522	145,197

a 1961-1981 chum salmon data available from 1981 Yukon Annual Management Report. Beginning in 1988 subsistence salmon harvest estimates have been generated from a stratified random sample of village households.

b The village was not surveyed, harvest estimates were calculated from calendar and post card replies.

c 1987 and 1988 average harvest.

d 1992 and 1993 average harvest.

e Additional salmon harvest was documented under personal use salmon harvest tables.

f Alatna combined with Allakaket.

g Catches by Fairbanks subsistence use permit holders that fished in District 5 of the Yukon River.

h Salmon catches expanded for permits not returned and household interviews (1981-1989). Beginning in 1990, reported harvest is from returned permits only.

i Other permit holders that fished in District 5 but did not reside in the villages listed.

j Permits required beginning in 1988 for Subdistricts 6-A and 6-B. In 1988 and 1989, permit and household interview data were expanded. Beginning in 1990, reported harvest is from returned permits only.

k Catches by Fairbanks subsistence use permit holders that fished in the Tanana River. Permits required beginning in 1964 for the Tanana River upstream of the Wood River.

l Other permit holders that fished in District 6 but did not reside in the villages listed.

m Estimated summer chum carcasses available for subsistence use as a byproduct of the commercial fishery are documented in the total utilization tables of the Yukon Area Annual Management Report.

Appendix Table B.3. Estimated Yukon Area fall chum salmon subsistence harvest in numbers of fish by village, 1982-1993. Blanks indicate harvest information was not collected. Includes commercial related harvest to produce roe sold, 1982-1988. a

Village	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1984-1988 Average	1989-1993 Average
Scammon Bay						117	551 b	10 b			79	7	334 c	43 d
Hooper Bay						105	1,711 b	146 b			127	113	908 c	120 d
Coastal District Subtotal						222	2,262	156			206	120	1,242	163
Sheldon Pt.	886	233	555	713	259	882	289	586	102	84	490	158	540	284
Alakanuk	1,336	903	1,219	2,603	2,030	3,748	1,194	430	267	193	401	182	2,159	295
Emmonak	4,458	2,715	3,329	4,539	2,746	8,160	1,792	840	2,353	2,027	1,628	1,507	4,113	1,671
Kotlik	3,336	4,387	3,782	5,420	3,965	5,677	2,200	3,058	2,613	1,631	2,697	5,923	4,209	3,184
Mouth to Anuk River Subtotal	10,016	8,238	8,885	13,275	9,000	18,467	5,475	4,914	5,335	3,935	5,216	7,770	11,020	5,434
Mt. Village	2,810	4,065	3,497	3,591	2,947	4,897	1,880	4,641	1,566	1,473	1,052	1,113	3,362	1,969
Pitkas Pt./St. Marys	2,386	3,138	3,927	3,315	5,401	3,966	2,533	1,970	956	2,202	77	708	3,828	1,183
Pilot Station	1,568	1,302	832	1,957	1,663	583	1,372	1,872	1,941	1,062	3,526	1,017	1,281	1,884
Marshall	2,747	1,836	3,138	2,681	3,472	4,008	2,815	1,532	1,724	891	2,727	256	3,223	1,426
Anuk River to Owl Slough Subtotal	9,511	10,341	11,394	11,544	13,483	13,454	8,600	10,015	6,187	5,628	7,382	3,094	11,695	6,461
Russian Mission	630	773	860	1,266	637	1,255	1,151	308	878	425	648	172	1,034	486
Holy Cross	1,029	2,090	1,373	1,024	1,148	1,598	596	711	1,178	190	845	1,066	1,148	798
Owl Slough to Bonasila R. Subtotal	1,659	2,863	2,233	2,290	1,785	2,853	1,747	1,019	2,056	615	1,493	1,238	2,182	1,284
Lower Yukon Area Total	21,186	21,442	22,512	27,109	24,268	34,996	18,084 e	16,104 e	13,578 e	10,178	14,297	12,222	26,139	13,342
Anvik	4,088	902	720	2,125	913	394	136	168	583	452	894	420	858	503
Graling	2,972	3,847	1,950	3,106	4,204	4,750	1,760	830	1,405	3,616	2,993	2,083	3,154	2,185
Kaltag	812	2,833	1,330	1,570	2,024	7,474	2,293	1,654	2,327	2,834	2,522	704	2,938	2,008
Nulato	217	3,159	1,675	4,240	1,762	2,200	1,673	2,436	3,546	1,637	1,910	571	2,310	2,020
Koyukuk	1,355	1,120	1,560	798	2,195	2,492	587	2,460	860	2,761	2,817	2,052	1,526	2,190
Galena	2,164	4,259	7,270	4,476	4,819	10,509	4,308	6,436	3,202	5,525	2,393	3,255	6,276	4,162
Ruby/Kokrines	6,662	12,319	8,505	6,717	7,101	11,000	5,171	6,599	3,352	2,856	4,499	1,085	7,699	3,678
Bonasila R. to Illinois Cr. Subtotal	18,270	28,439	23,010	23,032	23,018	38,819	15,928	20,583	15,275	19,681	18,028	10,170	24,761	16,747
Shageluk														
Innoko River Subtotal				0	370	434	0	4	0	0	865	211	161	216
Huslia	102	3,528	6,306	276	808	585	1,697	1,728	846	411	1,286	258	1,934	906
Hughes	1,231	327	1,280	1,260	1,422	586	311	260	70	270	325	169	972	219
Allakaket/Alatna f	716	1,915	556	707	878	1,477	443	1,969	3,050	513	1,579	235	812	1,469
Bettles								0	0	0	14	0	0	3
Koyukuk River Subtotal	2,049	5,770	8,142	2,243	3,108	2,648	2,451	3,957	3,966	1,194	3,204	662	3,718	2,597
District 4 Subtotal	20,319	34,209	31,152	25,275	26,496	41,901	18,379	24,544	19,241	20,875	22,097	11,043	28,641	19,560

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Appendix Table B.3. (page 2 of 2)

Village	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1984-1988 Average	1989-1993 Average
Tanana	31,470	41,630	42,690	28,113	32,049	41,825	55,998	40,845	41,145	40,868	19,365	23,103	40,135	39,644
Rampart	5,495	5,627	4,395	19,619	3,950	5,092	3,600	2,472	10,818	5,801	5,701	3,272	7,331	5,678
Fairbanks (permits) g h	9,272	12,865	12,920	13,874	11,708	5,264 e	0 e	7 e	82 e	2,022	2,491	930	8,753	920
Stevens Village	7,392	3,502	4,932	11,679	4,150	7,538	1,451	6,633	3,857	2,481	150	862	5,950	2,914
Beaver	1,878	6,004	0	1,761	3,321	5,750	96	7,242	757	7	361	692	2,186	1,693
Ft. Yukon	1,926	3,967	7,525	12,719	8,543	15,200	2,766	27,790	11,627	7,467	2,284	2,380	9,351	10,387
Circle/Central (permits) h	290	3,687	3,107	4,096	3,650	7,691	4,396	4,478	6,804	6,413	6,379	349	4,588	5,694
Eagle (permits) h	13,255	20,021	18,519	25,264	16,027	19,678	14,800	11,557	8,027	7,985	5,630	2,070	18,858	9,600
Other (permits) h i									529	100	0	1,750	0	126
Illinois Cr. to U.S. Can. Border Subtotal	70,978	97,303	94,088	117,125	83,398	108,038	83,107	101,024	83,646	73,144	42,361	35,408	97,151	76,656
Venetie	850	7,800	4,345		3,193	2,774	34	7,977	5,377	758	3,066	7,881	2,069	5,012
Chalkyitsik					1,533	2,686	1,068	3,000	1,490	100	274	475	1,057	1,068
Chandalar/Black Rivers Subtotal	850	7,800	4,345		4,726	5,460	1,102	10,977	6,867	858	3,340	8,356	3,127	6,080
District 5 Subtotal	71,828	105,103	98,433	117,125	88,124	113,498	84,209	112,001	90,513	74,002	45,701	43,764	100,278	82,736
Manley j	4,444	11,400	2,196	6,560	5,905	4,267	6,899	21,087	25,860	13,243	7,010	3,150	5,165	14,070
Minto j	3,568	6,489	4,025	4,642	545	5,419	2,615	2,005	3,652	5,276	3,017	301	3,449	2,850
Nenana j	9,034	11,685	13,520	22,901	15,902	26,909	26,889	25,340	12,464	17,932	13,253	5,929	21,224	14,984
Fairbanks (permits) h k	2,518	2,600	2,985	2,860	2,803	0 e	0 e	0 e	309 e	1,671	1,394	219 e	1,730	719
Other j l								10,222	2,283	2,347	1,039	352	0	3,249
Tanana River Subtotal	19,564	32,174	22,726	36,963	25,155	36,595	36,403	58,654	44,568	40,469	25,713	9,951	31,568	35,871
Upper Yukon Area Total	111,711 m	171,486 m	152,311 m	179,363 m	139,775 m	191,994	138,991 m	195,199 m	154,322 m	135,346 m	93,511 m	64,758	160,487	138,167
Alaska Yukon Area Total	132,897	192,928	174,823	206,472	164,043	226,990	157,075	211,303	167,900	145,524	107,808	76,980	186,626	151,509

a 1961-1981 chum salmon data available from 1981 Yukon Annual Management Report. Beginning in 1988 subsistence salmon harvest estimates have been generated from a stratified random sample of village households.

b The village was not surveyed, harvest estimates were calculated from calendar and post card replies.

c 1987 and 1988 average harvest.

d 1992 and 1993 average harvest.

e Additional salmon harvest was documented under personal use salmon harvest tables.

f Alatna combined with Allakaket.

g Catches by Fairbanks subsistence use permit holders that fished in District 5 of the Yukon River.

h Salmon catches expanded for permits not returned and household interviews (1981-1989). Beginning 1990, reported harvest is from returned permits only.

i Other permit holders that fished in District 5 but did not reside in the villages listed.

j Permits required beginning in 1988 for Subdistricts 6-A and 6-B. In 1988 and 1989, permit and household interview data were expanded. Beginning in 1990, reported harvest is from returned permits only.

k Catches by Fairbanks subsistence permit holders that fished in the Tanana River. Permits required beginning in 1964 for the Tanana River upstream of the Wood River.

l Other permits holders that fished in District 6 but did not reside in the villages listed.

m Estimated fall chum salmon carcasses available for subsistence use as a byproduct of the commercial fishery are documented in the total utilization tables of the Yukon Area Annual Management Report.

Appendix Table B.4. Estimated Yukon Area coho salmon subsistence harvest in numbers of fish by village, 1982-1993. Blanks indicate harvest information was not collected. a

Village	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1984-1988 Average	1989-1993 Average
Scammon Bay						64	326 b	2 b			31	40	195 c	36 d
Hooper Bay						69	1,523 b	211 b			28	0	796 c	14 d
Coastal District Subtotal						133	1,849	213			59	40	991	50
Sheldon Pt.	1,770	170	245	49	237	308	169	487	78	35	441	78	202	224
Alakanuk	1,313	438	776	894	1,518	1,116	634	334	156	391	966	138	988	397
Emmonak	4,795	1,290	3,659	1,552	732	3,497	1,578	1,259	1,283	801	666	196	2,204	841
Kotlik	3,314	1,692	1,415	751	238	1,475	2,008	2,997	1,784	581	3,353	1,931	1,177	2,129
Mouth to Anuk River Subtotal	11,192	3,590	6,095	3,246	2,725	6,396	4,389	5,077	3,301	1,808	5,426	2,343	4,570	3,591
Mt. Village	3,025	2,500	982	1,527	828	2,481	1,314	2,385	1,754	868	1,971	447	1,426	1,485
Pitkas Pt./St. Marys	2,783	1,529	2,024	1,113	4,832	1,740	3,147	971	515	1,617	2,771	451	2,571	1,265
Pilot Station	2,644	638	1,114	710	1,514	300	876	379	1,968	553	300	477	903	735
Marshall	1,777	1,405	2,946	1,484	1,966	2,373	1,767	1,304	2,107	259	1,545	320	2,107	1,107
Anuk River to Owl Slough Subtotal	10,229	6,072	7,066	4,834	9,140	6,894	7,104	5,039	6,344	3,297	6,587	1,695	7,008	4,592
Russian Mission	156	540	740	276	679	423	604	20	688	396	1,148	152	544	481
Holy Cross	519	377	0	100	102	259	935	517	338	944	105	88	279	398
Owl Slough to Bonasila R. Subtotal	675	917	740	376	781	682	1,539	537	1,026	1,340	1,253	240	824	879
Lower Yukon Area Total	22,096	10,579	13,901	8,456	12,646	14,105	14,881	10,866 e	10,671 e	6,445	13,325	4,318	13,392	9,112
Anvik	58	250	40	272	296	405	97	40	236	347	202	115	222	188
Grayling	1,014	1,275	97	0	860	599	692	969	10	1,363	859	164	450	673
Kaltag	62	0	0	0	229	0	0	792	501	1,260	2,105	334	46	998
Nulato	76	0	0	510	69	85	234	276	845	75	435	37	180	334
Koyukuk	187	40	200	120	154	894	10	110	162	307	1,877	70	276	505
Galena	347	759	452	1,072	465	1,349	1,029	415	572	422	1,398	124	873	586
Ruby/Kokrines	867	1,122	1,631	1,719	339	0	2,169	1,069	974	410	1,299	308	1,172	812
Bonasila R. to Illinois Cr. Subtotal	2,611	3,446	2,420	3,693	2,412	3,332	4,231	3,671	3,300	4,184	8,175	1,152	3,218	4,096
Shageluk *Innoko River Subtotal*					173	72	128	0	0	0	296	39	75	67
Huslia	17	475	12	0	31	124	201	150	235	150	233	9	74	155
Hughes	0	0	400	138	0	0	104	91	43	9	21	3	128	33
Allakaket/Alatna f	324	25	35	118	15	23	178	118	36	108	0	3	74	53
Bettles								0	0	0	0	0	0	0
Koyukuk River Subtotal	341	500	447	256	46	147	483	359	314	267	254	15	276	242
District 4 Subtotal	2,952	3,946	2,867	3,949	2,631	3,551	4,842	4,030	3,614	4,451	8,725	1,206	3,568	4,405

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Appendix Table B.4 (page 2 of 2)

Village	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1984-1988 Average	1989-1993 Average
Tanana	3,260	2,312	16,898	7,384	4,691	6,680	16,922	5,518	8,580	4,448	11,406	5,576	10,515	7,106
Rampart	0	47	120	513	110	81	842	87	591	58	75	38	333	170
Fairbanks (permits) g h	20	78	254	13	709	6 e	0 e	0 e	5 e	8	34	0	196	9
Stevens Village	23	0	145	182	67	0	604	208	479	0	20	0	200	141
Beaver	0	0	0	1	124	0	164	774	172	1	398	135	58	296
Ft. Yukon	125	11	33	3	118	41	370	406	727	380	341	5	113	372
Circle/Central (permits) h	0	0	0	0	37	0	41	1	206	5	54	10	16	55
Eagle (permits) h	0	0	17	2	6	0	11	0	0	0	3	85	7	18
Other (permits) h i							0	165	450	12	0	0	0	125
Illinois Cr. to U.S. Can. Border														
Subtotal	3,428	2,448	17,467	8,098	5,862	6,808	18,954	7,159	11,210	4,912	12,331	5,849	11,438	8,292
Venetie	0	0	0		0	17	0	2	348	12	45	135	3	108
Chalkyitsik					8	2	801	26	4	7	0	0	162	7
Chandalar/Black River														
Subtotal	0	0	0		8	19	801	28	352	19	45	135	166	116
District 5 Subtotal	3,428	2,448	17,467	8,098	5,870	6,827	19,755	7,187	11,562	4,931	12,376	5,984	11,603	8,408
Manley j	837	1,350	1,566	1,926	538	1,467	2,103	5,310	7,574	6,361	4,725	1,535	1,520	5,101
Minto j	1,500	0	800	1,144	1,058	671	2,729	1,179	818	526	614	300	1,280	687
Nenana j	3,078	4,352	10,270	7,614	10,090	19,592	25,369	7,593	7,381	10,171	8,895	1,314	14,587	7,071
Fairbanks (permits) h k	2,003	1,230	2,149	1,077	1,635	0 e	0 e	0 e	66 e	2,501	2,281	0	972	970
Other j l								4,759	1,774	2,002	1,039	1,155	0	2,146
Tanana River														
Subtotal	7,418	6,932	14,785	11,761	13,321	21,730	30,201	18,841	17,613	21,561	17,554	4,304	18,360	15,975
Upper Yukon Area Total	13,798	13,326	35,119	23,808	21,822	32,108	54,798	30,058	32,789 m	30,943 m	38,655 m	11,494	33,531	28,788
Alaska Yukon Area Total	35,894	23,905	49,020	32,264	34,468	46,213	69,679	40,924	43,460	37,388	51,980	15,812	46,923	37,900

a 1961-1981 coho salmon data available from 1981 Yukon Annual Management Report. Beginning in 1988 subsistence salmon harvest estimates have been generated from a stratified random sample of village households.

b The village was not surveyed, harvest estimates were calculated from calendar and post card replies.

c 1987 and 1988 average harvest.

d 1992 and 1993 average harvest.

e Additional salmon harvest was documented under personal use salmon harvest tables.

f Alatna combined with Allakaket.

g Catches by Fairbanks subsistence use permit holders that fished in District 5 of the Yukon River.

h Salmon catches expanded for permits not returned and household interviews (1981-1989). Beginning 1990, reported harvest is from returned permits only.

i Other permit holders that fished in District 5 but did not reside in the villages listed.

j Permits required beginning in 1988 for Subdistricts 6-A and 6-B. In 1988 and 1989, permit and household interview data were expanded. Beginning in 1990, reported harvest is from returned permits only.

k Catches by Fairbanks subsistence use permit holders that fished in the Tanana River. Permits required beginning in 1964 for the Tanana river upstream of the Wood River.

l Other permit holders that fished in District 6 but did not reside in the villages listed.

m Estimated coho salmon carcasses available for subsistence use as a byproduct of the commercial fishery are documented in the total utilization tables of the Yukon Area Annual Management Report.

Appendix Table B.5. Subsistence salmon catches taken under authority of a permit in District 5, Upper Yukon Area, 1974-1993. a

Upper Yukon River (Hess Creek to Dall River) Subsistence Salmon Fishery b

Year	No. of Permits Issued	No. of Permits Returned	Number Reporting Catches c	Chinook	Summer Chum d	Fall Chum d	Coho
1974	29	e	e	591		1,857	1,271
1975	19	e	e	727		778	70
1976	28	e	18	531		974	e
1977	38	e	e	467		2,567	e
1978	57	e	e	1,333		9,735	e
1979	55	e	41	2,194		12,374	e
1980	70	e	67	1,350		6,488	36
1981	57	e	24	1,095		12,034	e
1982	64	e	44	1,935		11,328	20
1983	68	e	46	2,672		15,059	e
1984	67	e	54	4,676		27,869	399
1985	55	e	42	2,618		21,832	33
1986	76	e	58	3,827		18,690	759
1987 f	16	e	14	1,818	2,091	7,631	6
1988	24	21	18	1,747	2,097	3,183	606
1989	26	20	13	2,483	574	1,157	309
1990 g	26	25	16	2,033	3,493	1,109	455
1991	52	46	34	2,529	1,295	3,953	20
1992	45	42	33	2,241	975	2,491	34
1993	49	47	36	3,767	492	2,915	16

Upper Yukon River (22 Mi Slough to U.S./Canada Border) Subsistence Salmon Fishery

Year	No. of Permits Issued	No. of Permits Returned	Number Reporting Catches c	Chinook	Summer Chum d	Fall Chum d	Coho
1979	75	e	6	4,063		30,475	114
1980	48	e	39	3,649		18,477	6
1981	71	e	51	4,510		38,333	e
1982	60	e	61	3,833		15,432	e
1983	53	e	52	2,831		23,708	e
1984	58	e	54	2,543		21,675	17
1985	59	e	36	2,419		19,059	2
1986	40	e	52	4,148		20,701	43
1987 f	51	51	58	3,602	2,495	27,369	0
1988	58	57	50	2,783	2,134	9,078	101
1989	59	56	42	1,186	68	7,515	1
1990 g	81	75	54	3,746	1,629	14,992	206
1991	70	69	48	3,219	658	14,898	5
1992	85	79	54	2,984	409	12,009	57
1993	79	79	49	1,910	118	2,419	95

a Salmon catches expanded for permits not returned (1974-1987). Beginning in 1988, reported harvest from returned permits only.

b Includes catches from Stevens Village and Rampart.

c Some fishermen reporting catches did not have permits.

d Summer chum and fall chum salmon undifferentiated from 1974-1986.

e Information not available.

f Personal use fishery established only for fall chum salmon in 1987.

g Some fishermen may have had personal use catches due to changes in the subsistence law. No personal use permits have been issued since 1990.

Appendix Table B.6. Subsistence salmon catches taken under authority of a permit, in the Tanana River drainage, 1973-1993. a

Tanana River (Subdistrict 6-A) Subsistence Salmon Fishery b c

Year	No. of Permits Issued	No. of Permits Returned	Number Reporting Catches	Chinook	Summer Chum	Fall Chum	Coho
1988	28	24	18	845	1,389	9,165	3,455
1989 d	29	28	24 e	651	1,918	25,266	5,292
1990 d	42	36	26	1,369	2,250	27,957	8,408
1991	45	41	31	420	1,716	17,472	8,486
1992	38	35	26	508	450	5,999	5,028
1993 d	42	41	22	331	784	2,617	1,317

Tanana River (Subdistrict 6-B) Subsistence Salmon Fishery

Year	No. of Permits Issued	No. of Permits Returned	Number Reporting Catches	Chinook	Summer Chum	Fall Chum	Coho
1988	75	66	52	3,721	3,167	18,902	18,906
1989 f	60	51	37 e	455	363	18,506	8,453
1990 f	70	58	38	1,234	1,966	16,332	9,155
1991 f	87	78	51	1,796	2,373	21,629	11,971
1992 f	98	89	57	1,587	7,820	18,782	11,409
1993	99	89	38	1,341	5,976	7,166	2,987

Upper Tanana River (Upstream of Wood River) Subsistence Salmon Fishery

Year	No. of Permits Issued	No. of Permits Returned	Number Reporting Catches	Chinook	Summer Chum	Fall Chum	Coho
1973	22	g	4	26	771	886	h
1974	70	g	g	38	1,373	1,580	h
1975	36	g	g	32	751	864	h
1976	110	g	g	31	1,314	1,512	h
1977	89	g	33	81	118	607	h
1978	160	g	126	126	2,729	1,188	h
1979	246	g	199	264	2,384	4,459	h
1980	315	g	254	282	3,729	4,059	h
1981	346	g	228	440	3,239	5,770	h
1982	330	g	209	451	2,708	4,521	h
1983	259	g	147	475	2,276	3,830	h
1984	308	g	212	321	3,177	5,134	h
1985	291	g	155	326	2,646	3,937	h
1986	323	g	211	637	4,031	4,437	h
1987 i	217	g	123	531	2,739	0	0
1988	0	0	0	0	0	0	0
1989	2	2	2	5	0	39	0
1990 j	20	19	6	15	69	279	50
1991	157	149	104	299	980	1,368	1,103
1992	160	157	94	343	1,234	932	1,117
1993 k	10	10	8	0	0	5	0

a Salmon catches expanded for permits not returned (1973-1987). Beginning in 1988, reported harvest from returned permits only.

b Includes Kantishna River catches.

c Permit requirement for Subdistricts 6-A and 6-B went into effect in 1988; however, very few permits were issued in 1988, and not all fishermen had permits in 1989.

d Includes salmon given away as part of the Departments test fishing projects in Manley.

e Some fishermen reporting catches did not have permits.

f Includes salmon given away as part of the Departments test fishing projects in Nenana.

g Information not available.

h Fall chum and coho salmon were not reported as separate species from 1973-1987.

i Personal use fishery established for nonrural residents beginning in July of 1987.

j Some fishermen had both personal use and subsistence permits since the McDowell Decision which became effective July 1990 stated that all Alaskan residents were eligible subsistence participants.

k Personal use fishery established for those fishing for salmon in this area (fall chum are from incidental subsistence whitefish and sucker permits).

Appendix Table B.7. Personal use salmon catches taken under authority of a permit in the Lower Yukon Area, and in District 5, Upper Yukon Area, 1987-1993. a

Lower Yukon Personal Use Salmon Fishery

Year	No. of Permits Issued	No. of Permits Returned	Number Reporting Catches	Chinook	Summer Chum	Fall Chum	Coho
1987	0	0	0			0	
1988	17	14	10	67	416	5	0
1989	26	23	12	286	381	18	59
1990	19	16	15	450	256	60	8
1991	0	0	0	0	0	0	0
1992	Regulations did not provide for a personal use fishery.						
1993	Regulations did not provide for a personal use fishery.						

Upper Yukon River (Hess Creek to Dall River) Personal Use Salmon Fishery

Year	No. of Permits Issued	No. of Permits Returned	Number Reporting Catches b	Chinook	Summer Chum	Fall Chum	Coho
1987	42	c	33	1,674	4,262	15,750	58
1988	45	42	35	1,435	567	1,762	103
1989	45	42	32	1,877	295	3,294	82
1990 d	41	36	26	1,529	641	3,723	18
1991	0	0	0	0	0	0	0
1992	Regulations did not provide for a personal use fishery.						
1993	Regulations did not provide for a personal use fishery.						

Upper Yukon River (22 Mi Slough to U.S./Canada Border) Personal Use Salmon Fishery

Year	No. of Permits Issued	No. of Permits Returned	Number Reporting Catches b	Chinook	Summer Chum	Fall Chum	Coho
1987	2	2	2	32	0	0	0
1988	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0
1990	4	4	3	164	0	0	0
1991	0	0	0	0	0	0	0
1992	Regulations did not provide for a personal use fishery.						
1993	Regulations did not provide for a personal use fishery.						

a Personal use fishery during 1987 applied to nonrural residents harvesting only fall chum. Beginning in 1988, nonrural personal use fishing applied to all salmon species and reported harvest is from returned permits only. Effective July 1, 1990 all Alaskan residents became eligible for subsistence fishing permits.

b Some fishermen reporting catches did not have permits.

c Information not available.

d Includes personal use catches of two chinook salmon taken by one permittee from a non-permit area below Rampart.

Appendix Table B.8. Personal use salmon catches taken under authority of a permit in the Tanana River drainage, 1987-1993. a

Tanana River (Subdistrict 6-A) Personal Use Fishery b

Year	No. of Permits Issued	No. of Permits Returned	Number Reporting Catches	Chinook	Summer Chum	Fall Chum	Coho
1987	0	0	0			0	
1988	1	1	0	0	0	0	0
1989	1	1	1	0	4	0	0
1990	1	1	0	0	0	0	0
1991	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0
1993	Regulations did not provide for a personal use fishery.						

Tanana River (Subdistrict 6-B) Personal Use Fishery

Year	No. of Permits Issued	No. of Permits Returned	Number Reporting Catches	Chinook	Summer Chum	Fall Chum	Coho
1987	0	0	0			0	
1988	1	1	1	306	60	40	22
1989	1	1	1	56	220	0	0
1990	4	4	3	9	12	40	35
1991	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0
1993	Regulations did not provide for a personal use fishery.						

Upper Tanana River (Upstream of Wood River) Personal Use Fishery

Year	No. of Permits Issued	No. of Permits Returned	Number Reporting Catches	Chinook	Summer Chum	Fall Chum	Coho
1987	132 c	d	60 e			3,316	2,465
1988	208	162	120	317	1,182	2,074	1,125
1989	175	160	112	397	991	1,770	731
1990	152	144	102	442	918	1,353	1,120
1991	0	0	0	0	0	0	0
1992	0	0	0	0	0	0	0
1993	137	135	81	426	674	163	0

a Personal use fishery during 1987 applied to nonrural residents harvesting only fall chum. Beginning in 1988, nonrural personal use fishing applied to all salmon species and reported harvest is from returned permits only. Effective July 1, 1990 all Alaskan residents became eligible for subsistence fishing permits. In 1993, Upper Tanana River is again a personal use area only.

b Includes Kantishna River catches.

c Represents 60 former subsistence fishermen who were reissued permits to fish fall chum salmon for personal use.

d Information not available.

e Some fishing families used both subsistence and personal-use permits.

Appendix Table B.9. Subsistence and personal use chum salmon carcasses taken under authority of a permit, Tanana River drainage, 1973-1993.

Upper Tanana R. (Big Delta area) Subsistence and Personal Use Chum Salmon Carcass Fishery

Year	No. of Permits Issued	No. of Permits Returned	Number Reporting Catches	Fall Chum Carcasses
1973	16	a	8	1,561
1974	21	a	a	1,974
1975	26	a	a	2,573
1976	36	a	a	3,441
1977	46	a	29	5,816
1978	70	a	43	2,517
1979	32	a	25	4,582
1980	57	a	36	4,915
1981	43	a	27	5,030
1982	37	a	13	1,690
1983	45	a	29	5,357
1984	31	a	14	2,353
1985	30	a	14	2,111
1986	27	a	19	2,276
1987 b	20	17	13	1,931
1988 b	22	20	15	2,100
1989 b	12	12	10	1,785
1990 b	7	7	3	750
1991	8	4	3	741
1992	10	10	9	1,897
1993 b c	0	0	0	0

a Information not available.

b Personal use permits 1987-1990 and 1993, all other years subsistence permits.

c The department chose not to issue any carcass permits to reduce spawning habitat disturbances.

Appendix Table B.10. Subsistence and personal use salmon catches taken under authority of a permit in District 5, Upper Yukon Area, 1974-1993. a

Upper Yukon River (Hess Creek to Dall River) Subsistence and Personal Use Salmon Fishery b

Year	No. of Permits Issued	No. of Permits Returned	Number Reporting Catches c	Chinook	Summer Chum d	Fall Chum d	Coho
1974	29	e	e	591		1,857	1,271
1975	19	e	e	727		778	70
1976	28	e	18	531		974	e
1977	38	e	e	467		2,567	e
1978	57	e	e	1,333		9,735	e
1979	55	e	41	2,194		12,374	e
1980	70	e	67	1,350		6,488	36
1981	57	e	24	1,095		12,034	e
1982	64	e	44	1,935		11,328	20
1983	68	e	46	2,672		15,059	e
1984	67	e	54	4,676		27,869	399
1985	55	e	42	2,618		21,832	33
1986	76	e	58	3,827		18,690	759
1987 f	58	e	47	3,492	6,353	23,381	64
1988	69	63	53	3,182	2,664	4,945	709
1989	71	62	45	4,360	869	4,451	391
1990 g h	67	61	42	3,562	4,134	4,832	473
1991	52	46	34	2,529	1,295	3,953	20
1992	45	42	33	2,241	975	2,491	34
1993	49	47	36	3,767	492	2,915	16

Upper Yukon River (22 Mi Slough to U.S./Canada Border) Subsistence and Personal Use Salmon Fishery

Year	No. of Permits Issued	No. of Permits Returned	Number Reporting Catches c	Chinook	Summer Chum d	Fall Chum d	Coho
1979	75	e	6	4,063		30,475	114
1980	48	e	39	3,649		18,477	6
1981	71	e	51	4,510		38,333	e
1982	60	e	61	3,833		15,432	e
1983	53	e	52	2,831		23,708	e
1984	58	e	54	2,543		21,675	17
1985	59	e	36	2,419		19,059	2
1986	40	e	52	4,148		20,701	43
1987 f	53	53	60	3,634	2,495	27,369	0
1988	58	57	50	2,783	2,134	9,078	101
1989	59	56	42	1,186	68	7,515	1
1990 h	85	79	57	3,910	1,629	14,992	206
1991	70	69	48	3,219	658	14,898	5
1992	85	79	54	2,984	409	12,009	57
1993	79	79	49	1,910	118	2,419	95

a Salmon catches expanded for permits not returned (1974-1987). Beginning in 1988, reported harvest from returned permits only.

b Includes catches from Stevens Village and Rampart.

c Some fishermen reporting catches did not have permits.

d Summer chum and fall chum salmon undifferentiated from 1974-1986.

e Information not available.

f Personal use fishery during 1987 applied to nonrural residents harvesting only fall chum salmon. Beginning in 1988, nonrural personal use fishing applied to all salmon species. Effective July 1, 1990 all Alaskan residents became eligible for subsistence fishing permits.

g Includes personal use catches of two chinook salmon taken by one permittee from a non-permit area below Rampart.

h No personal use permits have been issued since 1990.

Appendix Table B.11. Subsistence and personal use salmon catches taken under authority of a permit, in the Tanana River drainage, 1973-1993. a

Tanana River (Subdistrict 6-A) Subsistence and Personal Use Salmon Fishery b c

Year	No. of Permits Issued	No. of Permits Returned	Number Reporting Catches	Chinook	Summer Chum	Fall Chum	Coho
1988	29	25	18	845	1,389	9,165	3,455
1989 d	30	29	25 e	651	1,922	25,266	5,292
1990 d	43	37	26	1,369	2,250	27,957	8,408
1991	45	41	31	420	1,716	17,472	8,486
1992	38	35	26	508	450	5,999	5,028
1993 d	42	41	22	331	784	2,617	1,317

Tanana River (Subdistrict 6-B) Subsistence and Personal Use Salmon Fishery

Year	No. of Permits Issued	No. of Permits Returned	Number Reporting Catches	Chinook	Summer Chum	Fall Chum	Coho
1988	76	67	53	4,027	3,227	18,942	18,928
1989 f	61	52	38 e	511	583	18,506	8,453
1990 f	74	62	41	1,243	1,978	16,372	9,190
1991 f	87	78	51	1,796	2,373	21,629	11,971
1992 f	98	89	57	1,587	7,820	18,782	11,409
1993	99	89	38	1,341	5,976	7,166	2,987

Upper Tanana River (Upstream of Wood River) Subsistence and Personal Use Salmon Fishery

Year	No. of Permits Issued	No. of Permits Returned	Number Reporting Catches	Chinook	Summer Chum	Fall Chum	Coho
1973	22	g	4	26	771	886	h
1974	70	g	g	38	1,373	1,580	h
1975	36	g	g	32	751	864	h
1976	110	g	g	31	1,314	1,512	h
1977	89	g	33	81	118	607	h
1978	160	g	126	126	2,729	1,188	h
1979	246	g	199	264	2,384	4,459	h
1980	315	g	254	282	3,729	4,059	h
1981	346	g	228	440	3,239	5,770	h
1982	330	g	209	451	2,708	4,521	h
1983	259	g	147	475	2,276	3,830	h
1984	308	g	212	321	3,177	5,134	h
1985	291	g	155	326	2,646	3,937	h
1986	323	g	211	637	4,031	4,437	h
1987 i	349	g	183	531	2,739	3,316	2,465
1988	208	162	120	317	1,182	2,074	1,125
1989	177	162	114	402	991	1,809	731
1990 k	172	163	108	457	987	1,632	1,170
1991	157	149	104	299	980	1,368	1,103
1992	160	157	94	343	1,234	932	1,117
1993 l	147	145	89	426	674	168	0

a Salmon catches expanded for permits not returned (1973-1987). Beginning in 1988, reported harvest from returned permits only.

b Includes Kantishna River catches.

c Permit requirement for Subdistricts 6-A and 6-B went into effect in 1988; however, very few permits were issued in 1988, and not all fishermen had permits in 1989.

d Includes salmon given away as part of the Departments test fishing projects in Manley.

e Some fishermen reporting catches did not have permits.

f Includes salmon given away as part of the Departments test fishing projects in Nenana.

g Information not available.

h Fall chum and coho salmon were not reported as separate species from 1973-1987.

i Personal use fishery established for nonrural residents beginning in July of 1987.

j Includes 60 subsistence fishermen who were reissued permits to fish fall chum salmon for personal use.

k Some fishermen had both personal use and subsistence permits since the McDowell Decision which became effective July 1990 stated that all Alaskan residents were eligible subsistence participants.

l Personal use fishery established for those fishing for salmon in this area (fall chum are from incidental subsistence whitefish and sucker permits).

Appendix Table B.12. Summary of summer chum salmon commercial and subsistence harvest and use for District 4, 1986-1993.

Year	District 4 Commercial Harvest Sold in the Round	Estimated District 4 Commercial Salmon to Produce Roe [a]	Estimated District 4 Subsistence Summer Chum Salmon Harvest [b]	Shageluk Subsistence	Estimated District 4 Subsistence Only CATCH w/o Shageluk	Estimated District 4 Commercial used for Subsistence	Estimated District 4 Subsistence Only USE w/o Shageluk	Commercial Percent of District 4 Subsistence USE	Subsistence Only Catch as a Percent of District 4 Subsistence USE
1986	300	465,235	139,342	6,710	33,000 [c]	99,632	132,632	75%	25%
1987	29,991	179,809	133,295	8,015	24,800 [c]	100,480	125,280	80%	20%
1988	24,051	466,023	69,520	8,779	60,741	106,801 [d]	167,542	64%	36%
1989	18,554	491,690	33,095	8,842	24,253	80,360 [c]	104,613	77%	23%
1990	12,364	198,697	19,832	6,518	13,314	[e]			
1991	6,381	294,743	22,267	3,580	18,687	[e]			
1992	2,659	208,737	13,622	5,267	13,622	133,424	147,046	91%	9%
1993	27	42,930	8,169	4,183	8,169	32,149	40,318	80%	20%
86-93 AVG.	11,791	293,483	54,893	6,487	24,573	92,141	119,572	78%	22%

a Estimated commercial harvest includes estimated males and females harvested to produce roe sold. Numbers sold in the round are assumed to be primarily males and are not included in the estimated harvest to avoid double counting.

b Information compiled from Yukon Area Annual Management Reports, Table 14.

c Information is from footnote pertaining to District 4 in Yukon Area Annual Management Report, Table 14.

d Does not include commercial summer chum salmon used for subsistence from the villages of Galena and Ruby. The question was not asked on the survey form.

e Data was not collected.

Appendix Table B.13 Estimated households with dogs, number of dogs, and salmon fed to dogs for Yukon Area surveyed villages, 1990-1993. a

Year	Districts Surveyed or Permit	Number of Households with Dogs b c	Number of Dogs	Summer Chum Salmon Fed to Dogs	Fall Chum Salmon Fed to Dogs	Coho Salmon Fed to Dogs	Total Salmon Fed to Dogs
1990	Survey District 1	-	457	2,859	372	0	3,231
	Survey District 2	-	778	3,279	415	3,667	7,361
	Survey District 3	-	191	3,232	120	166	3,518
	Survey District 4	-	1,469	96,273	6,911	2,512	105,696
	Survey District 5	-	1,288	5,697	72,426	9,120	87,243
	Permits District 5	-	-	-	-	-	-
	Permits District 6	-	-	-	-	-	-
Totals		0	4,183	111,340	80,244	15,465	207,049
1991	Survey District 1	-	352	30	0	16	46
	Survey District 2	-	546	724	652	875	2,251
	Survey District 3	-	104	360	150	0	510
	Survey District 4	-	1,706	171,258	903	591	172,752
	Survey District 5	-	1,522	28,521	54,658	2,755	85,934
	Permits District 5	49	299	-	-	-	11,024
	Permits District 6	220	2,081	-	-	-	19,977
Totals		269	6,610	200,893	56,363	4,237	292,494
1992	Survey District 1	395	1,130	1,171	1,000	153	2,324
	Survey District 2	285	971	694	247	2,237	3,178
	Survey District 3	90	395	657	74	37	768
	Survey District 4	459	2,177	143,749	6,950	3,323	154,022
	Survey District 5	323	1,577	12,897	38,529	14,529	65,955
	Permits District 5	52	372	-	-	-	7,026
	Permits District 6	255	2,586	-	-	-	18,115
Totals		1,859	9,208	159,168	46,800	20,279	251,388
1993	Survey District 1	430	1,081	654	70	22	746
	Survey District 2	232	880	794	260	670	1,724
	Survey District 3	90	342	1,421	234	152	1,807
	Survey District 4	463	1,750	46,043	4,405	589	51,037
	Survey District 5	348	1,840	5,490	38,888	5,147	49,525
	Permits District 5	54	293	-	-	-	1,133
	Permits District 6	143	2,595	-	-	-	1,547
Totals		1,760	8,781	54,402	43,857	6,580	107,519

a Permits are by community of resident except the categorie "other" which is seperated by area fished. Permit totals do not include the community of Stevens Village because it is surveyed.

b Surveyed districts are estimated totals of numbers of households with dogs.

APPENDIX C

YUKON RIVER DRAINAGE SUBSISTENCE SALMON SURVEY AND PERMIT HARVEST FORMS

Appendix C.1. Example of the salmon catch calendar mailed to Lower Yukon Area fishermen (reduced from original 11x17-inch size), 1993.

PLEASE WRITE THE NUMBER OF ALL SALMON CAUGHT EACH DAY BY PEOPLE LIVING IN YOUR HOUSE. PLEASE INCLUDE SALMON THAT WERE GIVEN TO PEOPLE WHO LIVE IN OTHER HOUSES AND SALMON THAT WERE CAUGHT FOR DOGFOOD. DO NOT INCLUDE SALMON SOLD WHEN COMMERCIAL FISHING.

WHEN DONE SALMON FISHING FOR THE YEAR, PLEASE HAVE THE CALENDAR AVAILABLE FOR PICK UP BY SURVEYOR OR MAIL IT BACK TO FISH AND GAME.

THANK YOU

☐ Please check this box if you did not fish for salmon in 1993.

Commercial Fisheries Management and Development Division
Alaska Department of Fish and Game
1300 College Road

Bulk Rate
U.S. Postage
Paid
Fairbanks, Ak.
Permit No. 99

NAME

Lower Yukon

This calendar is sent to you by the Alaska Department of Fish and Game in Fairbanks.

JUNE 1993 SUBSISTENCE SALMON CALENDAR

PLEASE RECORD ANY SALMON CATCHES FROM MAY HERE:

MAY KINGS_____ MAY DOGS_____

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 KING___ DOG___ HUMPY___	2 KING___ DOG___ HUMPY___	3 KING___ DOG___ HUMPY___	4 KING___ DOG___ HUMPY___	5 KING___ DOG___ HUMPY___
6 KING___ DOG___ HUMPY___	7 KING___ DOG___ HUMPY___	8 KING___ DOG___ HUMPY___	9 KING___ DOG___ HUMPY___	10 KING___ DOG___ HUMPY___	11 KING___ DOG___ HUMPY___	12 KING___ DOG___ HUMPY___
13 KING___ DOG___ HUMPY___	14 KING___ DOG___ HUMPY___	15 KING___ DOG___ HUMPY___	16 KING___ DOG___ HUMPY___	17 KING___ DOG___ HUMPY___	18 KING___ DOG___ HUMPY___	19 KING___ DOG___ HUMPY___
20 KING___ DOG___ HUMPY___	21 KING___ DOG___ HUMPY___	22 KING___ DOG___ HUMPY___	23 KING___ DOG___ HUMPY___	24 KING___ DOG___ HUMPY___	25 KING___ DOG___ HUMPY___	26 KING___ DOG___ HUMPY___
27 KING___ DOG___ HUMPY___	28 KING___ DOG___ HUMPY___	29 KING___ DOG___ HUMPY___	30 KING___ DOG___ HUMPY___			

Summer Chum =
Pink =

JULY 1993 SUBSISTENCE SALMON CALENDAR

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	2 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	3 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___
4 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	5 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	6 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	7 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	8 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	9 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	10 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___
11 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	12 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	13 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	14 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	15 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	16 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	17 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___
18 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	19 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	20 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	21 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	22 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	23 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	24 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___
25 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	26 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	27 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	28 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	29 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	30 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___	31 KING___ DOG___ FALL CHUM___ SILVER___ HUMPY___

Summer Chum =
Coho =
Pink =

AUGUST 1993 SUBSISTENCE SALMON CALENDAR

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4	5	6	7
FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____
8	9	10	11	12	13	14
FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____
15	16	17	18	19	20	21
FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____
22	23	24	25	26	27	28
FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____
29	30	31				
FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____				

Coho =

SEPTEMBER 1993 SUBSISTENCE SALMON CALENDAR

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2	3	4
			FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____
5	6	7	8	9	10	11
FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____
12	13	14	15	16	17	18
FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____
19	20	21	22	23	24	25
FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____
26	27	28	29	30		
FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____	FALL CHUM____ SILVER____		

Coho =

Place Stamp Here

THANK YOU AGAIN.

This information is used to try to make sure there will be enough salmon for subsistence for Yukon River drainage families.

IF NOT PICKED UP BY OCTOBER 31, PLEASE RETURN TO:

Commercial Fisheries Management and Development Division
Alaska Department of Fish and Game
1300 College Road
Fairbanks, Alaska 99701

Appendix C.2. Example of the salmon catch calendar mailed to Upper Yukon Area fishermen (reduced from original 11x17-inch size), 1993.

PLEASE WRITE THE NUMBER OF ALL SALMON CAUGHT EACH DAY BY PEOPLE LIVING IN YOUR HOUSE. PLEASE INCLUDE SALMON THAT WERE GIVEN TO PEOPLE WHO LIVE IN OTHER HOUSES AND SALMON THAT WERE CAUGHT FOR DOGFOOD. DO NOT INCLUDE SALMON SOLD WHEN COMMERCIAL FISHING.

WHEN DONE SALMON FISHING FOR THE YEAR, PLEASE HAVE THE CALENDAR AVAILABLE FOR PICK UP BY SURVEYOR OR MAIL IT BACK TO FISH AND GAME.

THANK YOU

☐ Please check this box if you did not fish for salmon in 1993.

Commercial Fisheries Management and Development Division
Alaska Department of Fish and Game
3300 College Road

NAME

Upper Yukon

This calendar is sent to you by the Alaska Department of Fish and Game in Fairbanks.

Bulk Rate
U.S. Postage
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Fairbanks, Ak.
Permit No. 59

JULY 1993 SUBSISTENCE SALMON CALENDAR

PLEASE RECORD ANY SALMON CATCHES FROM JUNE HERE:

JUNE KINGS _____ JUNE DOGS: _____

Common name: Chum salmon

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1 KING _____ DOG _____ SILVER _____	2 KING _____ DOG _____ SILVER _____	3 KING _____ DOG _____ SILVER _____
4 KING _____ DOG _____ SILVER _____	5 KING _____ DOG _____ SILVER _____	6 KING _____ DOG _____ SILVER _____	7 KING _____ DOG _____ SILVER _____	8 KING _____ DOG _____ SILVER _____	9 KING _____ DOG _____ SILVER _____	10 KING _____ DOG _____ SILVER _____
11 KING _____ DOG _____ SILVER _____	12 KING _____ DOG _____ SILVER _____	13 KING _____ DOG _____ SILVER _____	14 KING _____ DOG _____ SILVER _____	15 KING _____ DOG _____ SILVER _____	16 KING _____ DOG _____ SILVER _____	17 KING _____ DOG _____ SILVER _____
18 KING _____ DOG _____ SILVER _____	19 KING _____ DOG _____ SILVER _____	20 KING _____ DOG _____ SILVER _____	21 KING _____ DOG _____ SILVER _____	22 KING _____ DOG _____ SILVER _____	23 KING _____ DOG _____ SILVER _____	24 KING _____ DOG _____ SILVER _____
25 KING _____ DOG _____ SILVER _____	26 KING _____ DOG _____ SILVER _____	27 KING _____ DOG _____ SILVER _____	28 KING _____ DOG _____ SILVER _____	29 KING _____ DOG _____ SILVER _____	30 KING _____ DOG _____ SILVER _____	31 KING _____ DOG _____ SILVER _____

Summer Chum =
Fall Chum =

AUGUST 1993 SUBSISTENCE SALMON CALENDAR

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	2 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	3 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	4 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	5 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	6 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	7 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")
8 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	9 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	10 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	11 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	12 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	13 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	14 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")
15 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	16 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	17 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	18 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	19 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	20 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	21 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")
22 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	23 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	24 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	25 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	26 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	27 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	28 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")
29 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	30 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")	31 KING _____ DOG _____ SILVER _____ COHO _____ ("Chinook")				

Summer Chum =
Fall Chum =

SEPTEMBER 1993 — SUBSISTENCE SALMON CALENDAR

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1	2	3	4
				SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")
Fall Chum =	5	6	7	8	9	10	11
	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")
	12	13	14	15	16	17	18
	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")
	19	20	21	22	23	24	25
	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")
	26	27	28	29	30		
	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")		

OCTOBER 1993 — SUBSISTENCE SALMON CALENDAR

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1	2
						SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")
Fall Chum =	3	4	5	6	7	8	9
	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")
	10	11	12	13	14	15	16
	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")
	17	18	19	20	21	22	23
	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")
	24	25	26	27	28	29	30
	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")	SILVER ____ COHO ____ ("CHINOOK")
	31						
	SILVER ____ COHO ____ ("CHINOOK")						

THANK YOU AGAIN.

This information is used to try to make sure there will be enough salmon for subsistence for Yukon River drainage families.

Place Stamp Here

IF NOT PICKED UP BY OCTOBER 31, PLEASE RETURN TO:

Commercial Fisheries Management
and Development Division
Alaska Department of Fish and Game
1300 College Road
Fairbanks, Alaska 99701

Appendix C.3. Example of the preseason letter mailed with the 1993 catch calendars to Yukon River households.

STATE OF ALASKA

WALTER J. HICKEL, GOVERNOR

DEPARTMENT OF FISH AND GAME

May 15, 1993

Dear Subsistence Salmon Fishermen:

The 1993 salmon fishing season is rapidly approaching. Each year we strive to improve the accuracy of the subsistence salmon harvest estimate for the Yukon River drainage and its communities in Alaska. These estimates are very important because they are used in regulation decisions by the Alaska Board of Fisheries and in the international treaty negotiations with Canada.

Many of you expressed an interest in the results of the survey during our community visits and interviews with fishing households last fall. We interviewed 870 households of the approximately 2,309 households in the nonpermitted areas of the Yukon River drainage. Almost 1,069 Yukon River households were estimated to have participated in Yukon River subsistence fisheries in 1992. Additional Yukon River Area salmon subsistence harvests were compiled from the 425 households who were issued permits to fish in areas of the Yukon or Tanana Rivers where permits were required.

A total of 47,077 chinook salmon, 142,192 summer chum salmon, 107,808 fall chum salmon, and 51,980 coho salmon were estimated to have been harvested in both nonpermit and permit areas of the Yukon River subsistence fisheries during the 1992 fishing season. The total Yukon River drainage subsistence salmon harvest has been estimated by community and fishing district on the attached table. To help us understand the role of the subsistence fishery to households and communities, we also recorded fishing gear information, number of dogs and the number of fish fed to dogs, and the size of fishing households.

I would like to personally thank you for your participation in the 1992 survey. The project is continuing for the 1993 fishing season, and I have attached a 1993 fishing calendar for you to record your daily harvest of subsistence fish. In addition to our normal subsistence questions for 1993, we will be mapping subsistence fishing locations. If you fish in more than one location, please keep track of the fish you catch by location.

Thank you again for your cooperation!

Sincerely,

Russ Holder
Fishery Biologist
Commercial Fisheries Management
and Development Division
(907) 456-4286

1992 ALASKAN YUKON RIVER DRAINAGE SUBSISTENCE SALMON HARVESTS a/

Village	Estimation Method b/	Total Households or Permits Issued	Households Contacted or Permits Returned	Estimated Harvest			
				Chinook	Summer Chum	Fall Chum	Coho
Scammon Bay	Survey	58	18	948	3,795	79	31
Hooper Bay	Survey	115	26	503	12,900	127	28
Sheldon Pt.	Survey	24	21	388	1,415	490	441
Alakanuk	Survey	124	34	623	9,951	401	966
Emmonak c/	Survey	139	37	2,336	12,296	1,628	666
Kotlik d/	Survey	100	32	1,794	9,577	2,697	3,353
District 1 Subtotal		560	168	6,592	49,934	5,422	5,485
Mt. Village	Survey	138	43	1,269	7,866	1,052	1,971
Pitkas Pt.	Survey	24	12	851	759	77	641
St. Marys	Survey	84	40	1,753	7,796	2,356	2,130
Pilot Station	Survey	100	21	1,818	6,236	1,170	300
Marshall	Survey	63	23	1,403	2,076	2,727	1,545
District 2 Subtotal		409	139	7,074	24,731	7,382	6,587
Russian Mission	Survey	54	19	1,282	3,331	648	1,148
Holy Cross	Survey	50	21	3,491	1,001	845	105
District 3 Subtotal		104	40	4,773	4,332	1,493	1,253
Anvik	Survey	37	20	389	1,142	894	202
Shageluk	Survey	32	23	218	5,267	865	296
Grayling	Survey	56	32	1,074	3,605	2,993	859
Kaltag	Survey	51	23	1,084	1,204	2,522	2,105
Nulato	Survey	86	28	1,596	889	1,910	435
Koyukuk	Survey	42	20	510	1,130	2,817	1,877
Galena	Survey	173	41	1,870	3,232	2,393	1,398
Ruby	Survey	66	23	498	2,420	4,499	1,299
District 4 Subtotal		543	210	7,239	18,889	18,893	8,471
Huslia	Survey	60	27	751	13,670	1,286	253
Hughes	Survey	20	14	29	1,625	325	21
Allakaket	Survey	44	20	395	6,368	1,452	0
Alatna	Survey	10	9	42	490	127	0
Bettles	Survey	30	21	53	37	14	0
Koyukuk River Subtotal		164	91	1,270	22,190	3,204	254
Tanana	Survey	132	42	2,477	4,553	19,365	11,406
Rampart	Survey	28	20	2,802	4,494	5,701	75
Stevens Village	Survey	32	20	1,887	460	150	20
Birch Creek	Survey	15	13	44	0	0	0
Beaver	Survey	35	28	1,564	12	361	398
Ft. Yukon	Survey	199	50	4,122	1,700	2,284	341
Fairbanks NSB	Permit	39	37	1,394	706	2,491	34
Circle	Permit	21	19	1,585	265	6,279	0
Central	Permit	12	12	167	91	100	54
Eagle	Permit	39	36	1,040	23	5,630	3
Other e/	Permit	12	12	571	291	0	0
District 5 Subtotal		564	289	17,653	12,595	42,361	12,331
Venetie	Survey	54	22	35	0	3,066	45
Chalkyitsik	Survey	34	27	3	17	274	0
Chandalar/Black R. Subtotal		88	49	38	17	3,340	45
Manley	Permit	30	28	551	850	7,010	4,725
Minto	Permit	30	25	142	625	3,017	614
Nenana f/	Permit	52	48	1,267	6,372	13,253	8,895
Healy	Permit	7	7	0	0	1,003	1,038
Fairbanks NSB	Permit	166	161	402	1,342	1,394	2,281
Delta Junction g/	Permit	8	7	0	0	34	1
Other h/	Permit	9	9	76	315	2	0
Tanana River Subtotal		302	285	2,438	9,504	25,713	17,554
Survey Subtotal		2,309	870	39,882	131,312	67,595	34,335
Permit Subtotal		425	401	7,195	10,880	40,213	17,645
Alaska Yukon River Drainage Total		2,734	1,271	47,077	142,192	107,808	51,980

a/ Source: "Estimates of Subsistence Salmon Harvests in the Yukon River Drainage 1992" (draft, June 1993) by Russell R. Holder and Helen H. Hamner, Alaska Department of Fish and Game. Harvests are listed by fishermen's community of residence.

b/ Does not include permit information received after March 23, 1993.

c/ Includes 1,274 chinook, 3,068 summer chum, 1,366 fall chum, and 481 coho salmon harvested in ADF&G test fishery and given away for subsistence use.

d/ Includes 441 chinook, 921 summer chum, 1,096 fall chum, and 2,076 coho salmon harvested in ADF&G test fishery and given away for subsistence use.

e/ Includes information from permits issued to residents of other communities who fished the Upper Yukon Area.

f/ Includes 113 chinook, 112 summer chum, 110 fall chum salmon harvested in ADF&G test fishery and given away for subsistence use.

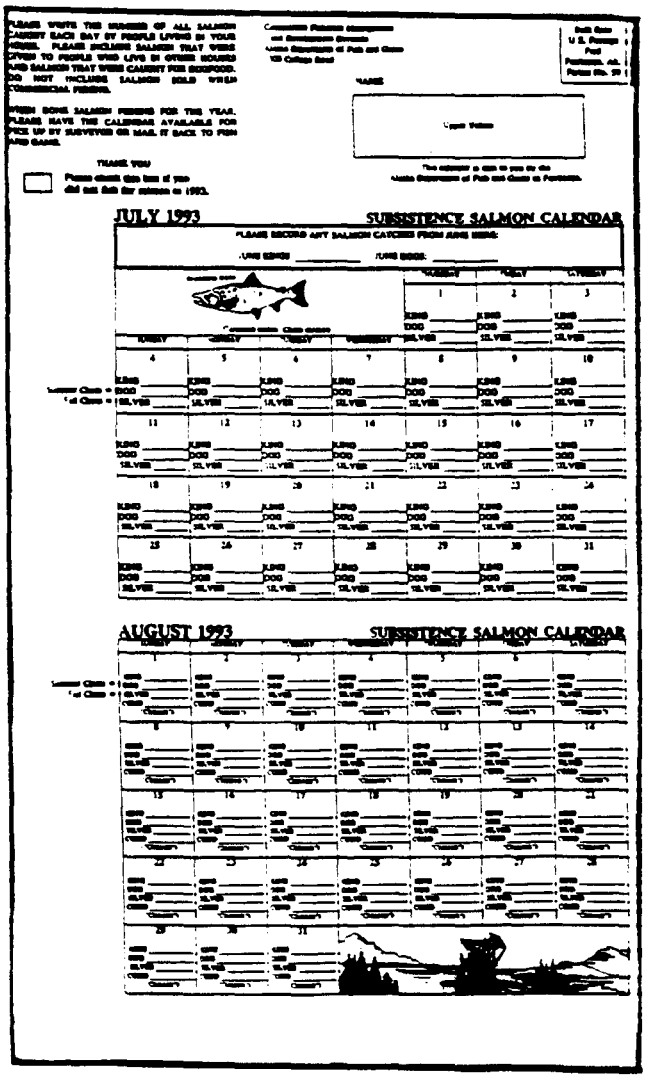
g/ Does not include a harvest of 1,897 post-spawned fall chum salmon.

h/ Includes information from permits issued to residents of other communities who fished the Tanana River Area.

Appendix C.4. Example of the salmon catch poster mailed to all Yukon Area post offices (reduced from original 11x17-inch size), 1993.

ATTENTION SUBSISTENCE SALMON FISHERMEN

PLEASE COMPLETE YOUR CATCH CALENDAR THIS SUMMER.



IT WILL BE PICKED UP IN SEPTEMBER OR OCTOBER.

IF YOU DID NOT RECEIVE ONE CONTACT:

DIVISION OF COMMERCIAL FISHERIES
DEPT. OF FISH AND GAME
1300 COLLEGE RD.
FAIRBANKS, AK. 99701
PHONE: 456-4266

OR

DIVISION OF COMMERCIAL FISHERIES
DEPT. OF FISH AND GAME
EMMONAK, AK. 99581
PHONE: 949-1731

Appendix C.5. Example of the announcements faxed to radio stations in the areas to be surveyed, 1993.

STATE OF ALASKA

WALTER J. HICKEL, GOVERNOR

DEPARTMENT OF FISH AND GAME

1300 COLLEGE ROAD
FAIRBANKS, ALASKA 99701-1599

October 1, 1993

KJNP
488-2216
FAX 488-5246
North Pole, Alaska

Please read the following message over the air from October 2 to October 4:

"The Alaska Department of Fish & Game will be conducting its annual subsistence salmon survey in Kaltag, Nulato, Koyukuk, and Galena this coming week. Surveyors will be picking up the bright yellow subsistence calendars and interviewing subsistence fishers. Fish and Game thanks you for helping them count the salmon harvest on the Yukon River."

Thanks for your help,

Richard J. Chapell

Richard Chapell
AK Dept. of Fish & Game
1300 College Road
Fairbanks, AK 99701
456-4286

Appendix C.6. Example of the Yukon River subsistence salmon postseason interview form, 1993.

Community_____ HHID# & Name_____
Date of Survey_____ Personinterviewed_____
Interviewer_____ Relation to HH_____

YUKON AREA
1993 Post-Season Subsistence Salmon Harvest Survey
CONFIDENTIAL INFORMATION

1. **We would like to make sure we have the correct name and address for this household.**
Correct name of household head_____
Mailing address _____
_____ Phone _____
Occupational or Permanent Note_____
Adult household member was contacted and declined to be interviewed [ ] _____

2. **Did anyone in this household catch salmon for subsistence this year?** Yes ___ No ___ (If no go to area II.)

Fish use includes fish eaten fresh, frozen, dried, smoked, and those used for dog food. Include all salmon kept for subsistence use. Include female carcasses with roe removed and roe sold commercially.

I. HOUSEHOLD FISHED

3. **May I have your fish catch calendar?**
Picked up by interviewer____ Didn't get one____ Didn't use____ Not Available____ Already sent In ____

CALENDAR NUMBERS IF AVAILABLE (totals of fish caught, off of calendar)

CHINOOK_____ SUMMER CHUM_____ FALL CHUM_____ COHO_____

4. **How many total salmon did you catch this year?** (are all fish on calendar?)

CHINOOK_____ SUMMER CHUM_____ FALL CHUM_____ COHO_____ PINK____Could not estimate___

5. **Where do you catch your subsistence salmon?** (Circle all that apply and divide harvest by area)

Ocean 1 2 3 4A 4B 4C 5A 5B 5C 5D Porcupine, Koyukuk, Innoko, Tanana/Permit

1st Area_____ CHINOOK_____ SUMMER CHUM_____ FALL CHUM_____ COHO_____ Could not estimate___

2nd Area_____ CHINOOK_____ SUMMER CHUM_____ FALL CHUM_____ COHO_____ Could not estimate___

6. **How many of these salmon did you process ("put up") for <u>your</u> household's use?**

CHINOOK_____ SUMMER CHUM_____ FALL CHUM_____ COHO_____ Could not estimate___

If this household did not process ("put up") all the salmon they caught, ask who they shared with.

7. **Did this household share the salmon catch with any other households?** (Names, HHIDs, Species and Numbers)

_____
_____
_____
_____

8. **How many of these fish were commercially caught?** (i.e. retained by a commercial fisherman during a commercial fishing period for subsistence use. Include female carcasses with roe removed and sold seperately and all male salmon in Districts 4, 5, and 6)

CHINOOK_____ SUMMER CHUM_____ FALL CHUM_____ COHO_____ Could not estimate__

9. **What is this households' primary type of subsistence fishing gear?** (Mark only one)

Set net ___ Drift net ___ Fishwheel ___ Other_____

II. ALL HOUSEHOLDS

10. Did this household fish for and catch any other fish this year?

WHITEFISH_____ SHEEFISH_____ OTHER_____

11. Was this household given any salmon? Yes___ No___

Subsistence Fishermen (Name)_____
CHINOOK_____ SUMMER CHUM_____ FALL CHUM_____ COHO_____ Could not estimate___

Subsistence Fishermen (Name)_____
CHINOOK_____ SUMMER CHUM_____ FALL CHUM_____ COHO_____ Could not estimate___

Commercial Fisherman (Name)(list only fish received for subsistence use while commercial fishing)_____
CHINOOK_____ SUMMER CHUM_____ FALL CHUM_____ COHO_____ Could not estimate___

From Fish and Game (Where)_____
CHINOOK_____ SUMMER CHUM_____ FALL CHUM_____ COHO_____ Could not estimate___

12. How many people live in this household? _____ People

13. How many dogs does this household have? _____

Do you feed whole fish to your dogs? Yes___ No___ Scraps___

How many whole salmon will you feed to your dogs this year? (These can be subsistence and commercial, especially Anvik, Grayling, Kaltag, and Nulato / numbers should represent whole fish, not scraps.
Are these fish from the commercial fishery yes___ no___ some___

(subsistence #'s) SUMMER CHUM (dog) _____ FALL CHUM (silver) _____ COHO (silver)_____
(commercial #'s) SUMMER CHUM (dog) _____ FALL CHUM (silver) _____ COHO (silver)_____

14. Did your household get enough subsistence salmon this year? Yes___ No___(Continue) Could not estimate___

Why didn't you meet your salmon needs this year?_____

_____

THIS HOUSEHOLD'S TOTAL SUBSISTENCE SALMON CATCH (This area filled in by the surveyor after the interview)
Subtract numbers of question 8 from question 4 (i.e. 4-8)

CHINOOK_____ SUMMER CHUM_____ FALL CHUM_____ COHO_____ Could not estimate___

THIS HOUSEHOLD'S TOTAL SUBSISTENCE SALMON USE (This area filled in by the surveyor after the interview)
(Add numbers from questions 6 and question 11 (i.e. 6+11)

CHINOOK_____ SUMMER CHUM_____ FALL CHUM_____ COHO_____ Could not estimate___

15. Have you seen or caught coho salmon which were spawning? Yes ___ No ___
Were they spawning or dead? Spawning ___ Dead ___
How many coho salmon would you estimate you saw?_____
Where did you see or catch these coho salmon (River name) _____
What date (Month,day,year) did you see these coho salmon _____

THANK YOU VERY MUCH FOR YOUR HELP. THIS HARVEST INFORMATION WILL BE USED TO MAKE SURE THERE WILL BE ENOUGH SUBSISTENCE SALMON FOR FAMILIES ALONG THE RIVER.
Interviewer comments about this interview or anything of value for assisting data analysis.

Appendix C.7. Example of the Subdistrict 4-A commercial fisherman interview form, 1993.

SUBDISTRICT 4-A
1993 Post-Season
Questions for Commercial Fishermen

1. Your fish tickets document your commercial sale of _____ pounds of chum salmon roe in 1993, and you reported killing _____ chum salmon to produce that roe.

   The department estimate is _____ chum salmon were killed to produce the roe sold above using .84 pounds of roe per female and .6 female proportion.

2. How many **total salmon** do you estimate you killed to produce the roe which you sold? (did all the fish tickets have the number of fish killed reported) _____ ¦¦ ____ out of ____ tickets totaling _____ lbs of roe do not have fish killed info.

3. Do you or crewmembers throw back live male summer chum salmon? Yes___ No___(If yes, ask A,B, and C/ If no go to 4)

   A. Did you **throw back** male fish

      after they dropped into a box? _____

      by a chute directly from the wheel into the water? _____

      by dipnet from a livebox? _____

      other_____

   B. This year there was 21 hours of commercial fishing time. How much of that time did you fish? _____

   C. Of the time you fished, how much of that time were males released?

      All the time ___ Three quarters ____ Half ____ One quarter ____ Less than one quarter ____

4. Your estimated commercial harvest is _____ summer chum salmon.

   _____Number used for fisherman's household subsistence purposes.

   _____Number given to other subsistence users (Name) _____

   _____Number Sold or Bartered to other users (Name) _____

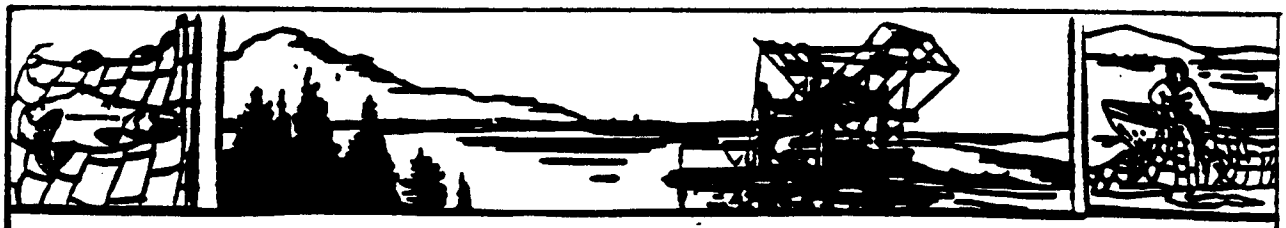
   How much money did you receive from those fish you sold?_____

   _____Number Lost to spoilage, wild animals, and birds

   _____Number/Other_____

CONFIDENTIAL

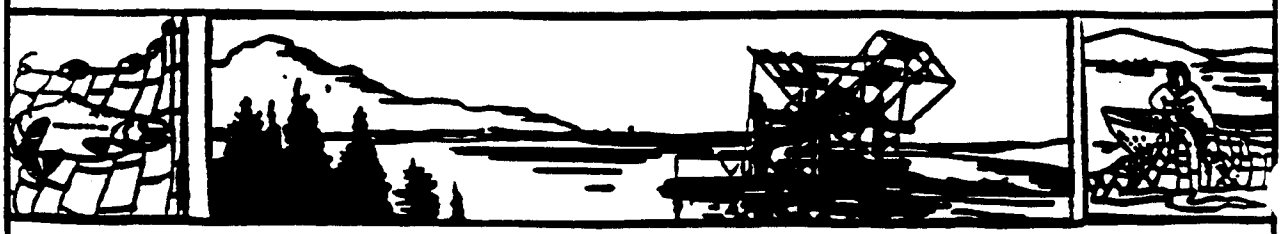
Appendix C.8. Example of the poster sent to the Upper Yukon Area post offices announcing the dates and times of village permit issuance, 1993.



ATTENTION SUBSISTENCE SALMON FISHERMEN

IF YOU ARE PLANNING TO FISH IN 1993 IN THE TANANA RIVER, EAGLE OR CIRCLE AREAS, OR IN THE VICINITY OF THE YUKON RIVER BRIDGE, YOU WILL NEED TO OBTAIN A SUBSISTENCE PERMIT. A REPRESENTATIVE FROM THE COMMERCIAL FISHERIES MANAGEMENT AND DEVELOPMENT DIVISION WILL BE IN YOUR AREA ISSUING PERMITS IN THE FOLLOWING PLACES AND TIMES:

VILLAGE	DATE	TIME	PLACE
Minto	5/24/93	noon to 3pm	Lake V. Lodge
Manley	5/25/93	10am to 1pm	City Park
Nenana	5/26/93	11am to 2pm	Boat Landing
Central	5/26/93	noon to 3pm	Post Office
Circle	5/27/93	11am to 2pm	Boat Landing
Eagle	6/02/93	4pm to 7pm	Post Office
Eagle	6/03/93	9am to 10am	Post Office



PLEASE POST

Appendix C.9. Example of the letter sent to all subsistence fishermen from the listed villages that complied with 1992 reporting requirements, announcing the dates and times for 1993 permit issuance.

STATE OF ALASKA

WALTER J. HICKEL, GOVERNOR

DEPARTMENT OF FISH AND GAME

1300 COLLEGE ROAD
FAIRBANKS, ALASKA 99701-1599

May 17, 1993

Dear Subsistence Fishermen:

Current regulations identify three areas in the upper Yukon River drainage for which salmon fishermen are required to obtain a subsistence permit. Subsistence fishing permits are required for fishing in the Eagle and Circle areas, near the Yukon River Bridge (between Hess Creek and the Dall River), and in the Tanana River drainage downstream of Wood River and upstream of Volkmar River. Our records indicate that you were issued a 1992 subsistence permit for one of the above areas. If you are planning to fish in 1993 in one of the regulated areas, you will again need to obtain a permit. We are writing to you prior to the 1993 fishing season to give you an opportunity to complete a subsistence permit for the 1993 season at one of the following places and times:

Village	Date	Time	Place
Nenana	5/26/93	11am to 2pm	Boat Landing
Minto	5/24/93	noon to 3pm	Lake View Lodge
Manley	5/25/93	10am to 1pm	City Park
Central	5/26/93	noon to 3pm	Post Office
Circle	5/27/92	11am to 2pm	Boat Landing
Eagle	6/2/93	4pm to 7pm	Post Office
Eagle	6/3/93	9am to 10am	Post Office

If you would like to be personally issued a permit, please complete the top portion of the enclosed "Application and Permit" form and bring this with you to meet us when we come to your area. We will be completing the "Issuing Officer" portion of your application and returning the completed subsistence permit to you.

If you would like to be issued a permit by mail, please complete the top portion of the enclosed "Application and Permit" form, indicate any changes to your address, fill in the requested information, sign it, and return the "Application and Permit" forms to us. We will complete the "Issuing Officer" section, sign it, and mail it back to you. The application form is not a permit until you have completed and signed the top portion, and we have completed the "Issuing Officer" portion and signed it.

Fishermen wanting to fish the Tanana River between the Wood River and Volkmar River are required to obtain a personal use permit. The Alaska Board of Fisheries recently established the Fairbanks Nonsubsistence Area, fishermen fishing within this area are required to obtain a personal use permit. We hope you have a successful fishing season in 1993.

Sincerely,

Bonnie M. Borba

Bonnie Borba
Fishery Biologist
Commercial Fisheries Management
and Development Division
(907)456-4286

Appendix C.10. Example of the Upper Yukon Area subsistence fishing permit application, 1993.

Household Application and Permit for Subsistence Fishing

Dept. of Fish and Game, Commercial Fisheries Management and Development Division
1300 College Road, Fairbanks, AK 99701 Phone 456-4286

(PLEASE PRINT)

Name _____ Phone _____
(Home, Work, Message)

Mailing Address _____
City State Zipcode

Number in your Household _____ Household Fishermen _____
(Include yourself) (Names of other household members authorized to fish this household's gear)

Number of Dogs in Household _____ Do you feed salmon to Dogs? yes no (Circle one)
(Whole fish, not scraps)

Area to be Fished (Circle one)
Tanana River: [6A] [6B], Yukon River Bridge, Circle/Eagle, Kantishna River

Gear: Fish Wheel_____ and/or Set Gillnet_____ length_____ stretch mesh size_____

Conditions of Permit: All regulations pertaining to subsistence fishing in the area to be fished are to be observed. Anyone fishing this household's gear must be named above as a fisherman and carry this permit on their person during any fishing activity. A summary of subsistence fishing regulations is available from the Fairbanks office. It is unlawful to sell or buy fish or their eggs caught for subsistence use. For a 24-hour recording of subsistence, personal use, and commercial salmon fishing schedules, call 452-4387.

An accurate record of fish taken under authority of this permit must be kept and recorded in the appropriate spaces on the reverse side of this permit. PERMITTEES FISHING IN SUBDISTRICT 6-B (three miles upstream of Totchaket Slough) ARE REQUIRED TO REPORT THEIR WEEKLY CATCHES BY CALLING THE DEPARTMENT OF FISH AND GAME AT 452-7466 BY 4:30 P.M. EVERY THURSDAY. Return this permit with your completed catch information to the Alaska Department of Fish and Game, 1300 College Road, Fairbanks, Alaska, 99701 within 10 days after permit expiration date. FAILURE TO RETURN YOUR PERMIT AND CATCH FORM WILL RESULT IN YOUR NOT BEING ISSUED A PERMIT NEXT YEAR.

Birthdate or
X_____ Date_____ DriversLicense#_____
Signature of Permittee - I hereby claim the information contained on this permit is a true statement as witnessed by my signature above and I further state that I am a resident of Alaska.

TO BE COMPLETED BY ISSUING OFFICER: The above named person(s) is authorized to take fish according to the following stipulations: Permit is valid for one location only and expires October 15, 1993, unless otherwise noted.

[] Tanana 6A/SA [] Tanana 6B/SB	Under authority of this permit 60 chinook salmon and 500 chum salmon may be taken from the date of issue through August 15, 1993, and from August 16 through October 15, 1993, 2,000 chum/coho salmon combined may be taken.
[] Yukon Bridge/SY	Under authority of this permit fish may be taken from the Yukon River from the mouth of Hess Creek to the mouth of the Dall River.
[] Circle, Eagle/SE	Under authority of this permit fish may be taken from the Yukon River from the mouth of 22 mile slough upstream to the U.S.-Canada border.
[] Kantishna River/SK	Under authority of this permit 450 chum salmon may be taken from the Kantishna River from August 15 through December 15, 1993. The fishery limit is 2,000 chum salmon, once the fishery limit is taken, the subsistence fishery will close by emergency order.

Signature of Issuing Officer Date Issued Permit Number

CATCH FORM FOR YUKON AREA SUBSISTENCE FISHERY

THIS RECORD MUST BE SUBMITTED TO THE DEPARTMENT OF FISH AND GAME WITHIN 10 DAYS AFTER THE EXPIRATION DATE OF THE SUBSISTENCE FISHING PERMIT WHETHER YOU FISHED OR NOT. FAILURE TO RETURN THIS FORM WILL BE CAUSE TO REFUSE YOU A SUBSISTENCE PERMIT NEXT YEAR.

DATE MM/DD/YY	CHINOOK (Kings)	CHUMS (Dogs)	COHOS (Silvers)	Whitefish	Pike	Burbot (Lush)	Other (specify)	# Whole Fish Fed to Dogs or Put Up for Dog Food

RETURN TO: Alaska Department of Fish and Game
Commercial Fisheries Management and Development Division
1300 College Road
Fairbanks, AK 99701
Phone: (907) 456-4286

____
Sign and Date this Catch Report when you return it.

Appendix C.11. Example of the Tolovana River Drainage subsistence pike fishing permit application, 1993.

Household Application and Permit
for Tolovana River Drainage Subsistence PIKE Fishing

Dept. of Fish and Game, Commercial Fisheries Management and Development Division
1300 College Road, Fairbanks, AK 99701 Phone 456-4286

(PLEASE PRINT)

Name _____ Phone_____
(Home,Work,Message)

Mailing Address _____
City State Zipcode

Number in your Household _____ Household Fishermen _____
(Include yourself) (Names of other household members authorized to fish this household's gear)

Gear: Set Gillnet_____ length_____ stretch mesh size_____

Jigging_____ Other_____

Conditions of Permit: All regulations pertaining to subsistence fishing in the area to be fished are to be observed. Anyone fishing this household's gear must be named above as a fisherman and carry this permit on their person during any fishing activity. A summary of subsistence fishing regulations is available from the Fairbanks office. It is unlawful to sell or buy fish or their eggs caught for subsistence use.

For a 24-hour recording of subsistence, personal use, and commercial salmon fishing schedules, call 452-4387.

An accurate record of fish taken under authority of this permit must be kept and recorded in the appropriate spaces on the reverse side of this permit. Return this permit with your completed catch information to the Alaska Department of Fish and Game, 1300 College Road, Fairbanks, Alaska, 99701 within 10 days after permit expiration date. FAILURE TO RETURN YOUR PERMIT AND CATCH FORM WILL RESULT IN YOUR NOT BEING ISSUED A PERMIT NEXT YEAR.

Birthdate or
X_____Date_____DriversLicense#_____
Signature of Permittee - I hereby claim the information contained on this permit is a true statement as witnessed by my signature above and I further state that I am a resident of Alaska.

TO BE COMPLETED BY ISSUING OFFICER: The above named person(s) is authorized to take fish according to the following stipulations: Permit is valid for one location only and expires December 31, 1993.

[] Tolovana Pike/ST Under authority of this permit pike from the Tolovana River drainage may be taken.

ST-
Signature of Issuing Officer Date Issued Permit Number

CATCH FORM FOR YUKON AREA
TOLOVANA RIVER DRAINAGE SUBSISTENCE PIKE FISHERY

THIS RECORD MUST BE SUBMITTED TO THE DEPARTMENT OF FISH AND GAME WITHIN 10 DAYS AFTER THE EXPIRATION DATE OF THE SUBSISTENCE FISHING PERMIT WHETHER YOU FISHED OR NOT. FAILURE TO RETURN THIS FORM WILL BE CAUSE TO REFUSE YOU A SUBSISTENCE PERMIT NEXT YEAR.

DATE MM/DD/YY	PIKE	WHITEFISH	SHEEFISH	BURBOT	SUCKERS	OTHER Species	Number

RETURN TO: Alaska Department of Fish and Game
Commercial Fisheries Management and Development Division
1300 College Road
Fairbanks, AK 99701
Phone: (907) 456-4286

____
Sign and Date this Catch Report when you return it.

Appendix C.12. Example of the Upper Yukon Area subsistence whitefish and sucker fishing permit application, 1993.

Household Application and Permit
for Subsistence Whitefish & Sucker Fishing

Dept. of Fish and Game, Commercial Fisheries Management and Development Division
1300 College Road, Fairbanks, AK 99701 Phone 456-4286

(PLEASE PRINT)

Name _____ Phone _____
(Home, Work, Message)

Mailing Address _____
City State Zipcode

Number in your Household _____ Household Fishermen _____
(Include yourself) (Names of other household members authorized to fish this household's gear)

Describe in detail the exact area to be fished. Include tributary streams and/or river mile designations. You may substitute a USGS map with your fishing area clearly designated.

_____

_____

_____

Dates you plan to fish: From _____ To _____

Gear: Fish Wheel _____ and/or Set Gillnet _____ length _____ stretch mesh size _____
Other (describe) _____

Number or pounds of whitefish and/or suckers to be harvested: _____

Conditions of Permit: Subsistence whitefish and sucker applications may go through a review process which usually takes 15 working days. All regulations pertaining to subsistence fishing in the area to be fished are to be observed. Anyone fishing this household's gear must be named above as a fisherman and carry this permit on their person during any fishing activity. A summary of subsistence fishing regulations is available from the Fairbanks office. For a 24-hour recording of subsistence, personal use, and commercial salmon fishing schedules, call 452-4387.

An accurate record of fish taken under authority of this permit must be kept and recorded in the appropriate spaces on the provided catch sheet. Return this permit with your completed catch information to the Alaska Department of Fish and Game, 1300 College Road, Fairbanks, Alaska, 99701 within 10 days after permit expiration date. FAILURE TO RETURN YOUR PERMIT AND CATCH FORM WILL RESULT IN YOUR NOT BEING ISSUED A PERMIT NEXT YEAR.

Birthdate
or
X _____ Date _____ Drivers License # _____

Signature of Permittee - I hereby claim the information contained on this permit is a true statement as witnessed by my signature above and I further state that I am a resident of Alaska.

TO BE COMPLETED BY ISSUING OFFICER: The above named person(s) is authorized to take fish according to the stipulations below and those in the attached letter:

Valid fishing location is _____

Valid fishing dates begin _____ and the permit expires on _____

Valid fishing gear is _____

Under authority of this permit _____ whitefish and _____ suckers may be taken.

SU-
Signature of Issuing Officer Date Issued Permit Number

CATCH FORM FOR YUKON AREA SUBSISTENCE WHITEFISH AND SUCKER FISHERY

THIS RECORD MUST BE SUBMITTED TO THE DEPARTMENT OF FISH AND GAME WITHIN 10 DAYS AFTER THE EXPIRATION DATE OF THE SUBSISTENCE FISHING PERMIT WHETHER YOU FISHED OR NOT. FAILURE TO RETURN THIS FORM WILL BE CAUSE TO REFUSE YOU A SUBSISTENCE PERMIT NEXT YEAR.

DATE			KILLED NONTARGET SPECIES		FISH RELEASED ALIVE		OTHER
MM/DD/YY	WHITEFISH	SUCKERS	Species	Number	Species	Number	

RETURN TO: Alaska Department of Fish and Game
Commercial Fisheries Management and Development Division
1300 College Road
Fairbanks, AK 99701
Phone: (907) 456-4286

Sign and Date this Catch Report when you return it.

Appendix C.13. Example of Upper Yukon Area personal use fishing permit application, 1993.

Household Application and Permit for Personal Use Fishing

Dept. of Fish and Game, Commercial Fisheries Management and Development Division
1300 College Road, Fairbanks, AK 99701 Phone 456-4286

(PLEASE PRINT)

Name _____ Phone _____
(Home, Work, Message)

Mailing Address _____
City State Zipcode

Number in your Household _____ Household Fishermen _____
(Include yourself) (Names of other household members authorized to fish this household's gear)

Area to be Fished (Circle one)
[Tanana River 6C] [Delta River]

Gear: Fish Wheel_____ and/or Set Gillnet_____ length_____ stretch mesh size_____

Conditions of Permit: All regulations pertaining to personal use fishing in the area to be fished are to be observed. Anyone fishing this household's gear must be named above as a fisherman and carry this permit on their person during any fishing activity. A summary of personal use fishing regulations is available from the Fairbanks office. Fish caught for personal use may not be sold, allowed to enter commercial use, or fed to dogs.

For a 24-hour recording of subsistence, personal use and commercial salmon fishing schedules, call 452-4387.

An accurate record of fish taken under authority of this permit must be kept and recorded in the appropriate spaces on the reverse side of this permit. PERMITTEES FISHING IN SUBDISTRICT 6-C ARE REQUIRED TO REPORT THEIR WEEKLY CATCHES BY CALLING THE DEPARTMENT OF FISH AND GAME AT 452-7466 BY 4:30 P.M. EVERY THURSDAY. Return this permit with your completed catch information to the Alaska Department of Fish and Game, 1300 College Road, Fairbanks, Alaska, 99701 within 10 days after permit expiration date. FAILURE TO RETURN YOUR PERMIT AND CATCH FORM WILL RESULT IN YOUR NOT BEING ISSUED A PERMIT NEXT YEAR.

A resident Alaska sport fishing license is required by 5 AAC 77.010.
Permit is invalid unless permittee has in their possession a valid resident Alaska sport fishing license.

X_____ Date_____ SportFishLicense#_____
Signature of Permittee - I hereby claim the information contained on this permit is a true statement as witnessed by my signature above and I further state that I am a resident of Alaska.

TO BE COMPLETED BY ISSUING OFFICER: The above named person(s) is authorized to take fish according to the following stipulations: Permit is valid for one location only.

[] Tanana 6C/PC — Under authority of this permit 10 chinook salmon and 75 chum salmon may be taken from the date of issue through August 15, 1993, and from August 16 through October 15, 1993, 75 chum/coho salmon combined may be taken.
Permit expires October 15, 1993.

[] Delta River/PD — Under authority of this permit 75 salmon may be taken from the Delta River after November 20, 1993 by hand, gaff, or rake.
Permit expires December 15, 1993.

Signature of Issuing Officer Date Issued Permit Number

CATCH FORM FOR YUKON AREA PERSONAL USE FISHERY

THIS RECORD MUST BE SUBMITTED TO THE DEPARTMENT OF FISH AND GAME WITHIN 10 DAYS AFTER THE EXPIRATION DATE OF THE PERSONAL USE FISHING PERMIT WHETHER YOU FISHED OR NOT. FAILURE TO RETURN THIS FORM WILL BE CAUSE TO REFUSE YOU A PERSONAL USE PERMIT NEXT YEAR.

DATE MM/DD/YY	CHINOOK (Kings)	CHUMS (Dogs)	COHOS (Silvers)	Whitefish	Pike	Burbot (Lush)	Sheefish	Other (specify

RETURN TO: Alaska Department of Fish and Game
Commercial Fisheries Management & Development Division
1300 College Road
Fairbanks, AK 99701
Phone: (907) 456-4286

Sign and Date this Catch Report when you return it.

Appendix C.14. Example of the Upper Yukon Area personal use whitefish and sucker fishing permit application, 1993.

Household Application and Permit for Personal Use Whitefish & Sucker Fishing

Dept. of Fish and Game, Commercial Fisheries Management and Development Division
1300 College Road, Fairbanks, AK 99701 Phone 456-4286

(PLEASE PRINT)
Name _____ Phone _____
(Home, Work, Message)

Mailing Address _____
City State Zipcode

Number in your Household _____ Household Fishermen _____
(Include yourself) (Names of other household members authorized to fish this household's gear)

Describe in detail the exact area to be fished. Include tributary streams and/or river mile designations. You may substitute a USGS map with your fishing area clearly designated.

_____
_____
_____

Dates you plan to fish: From _____ To _____

Gear: Fish Wheel _____ and/or Set Gillnet _____ length _____ stretch mesh size _____
Other (describe) _____

Number or pounds of whitefish and/or suckers to be harvested: _____

Conditions of Permit: Personal use whitefish and sucker applications go through a review process which usually takes 15 working days. All regulations pertaining to personal use fishing in the area to be fished are to be observed. Anyone fishing this household's gear must be named above as a fisherman and carry this permit on their person during any fishing activity. A summary of personal use fishing regulations is available from the Fairbanks office. Fish caught for personal use may not be sold, allowed to enter commercial use, or fed to dogs. For a 24-hour recording of subsistence, personal use, and commercial salmon fishing schedules, call 452-4387.

An accurate record of fish taken under authority of this permit must be kept and recorded in the appropriate spaces on the provided catch sheet. Return this permit with your completed catch information to the Alaska Department of Fish and Game, 1300 College Road, Fairbanks, Alaska, 99701 within 10 days after permit expiration date. FAILURE TO RETURN YOUR PERMIT AND CATCH FORM WILL RESULT IN YOUR NOT BEING ISSUED A PERMIT NEXT YEAR. A resident Alaska sport fishing license is required by 5 AAC 77.010. Permit is invalid unless permittee has in their possession a valid resident Alaska sport fishing license.

X _____ Date _____ SportFishLicense# _____
Signature of Permittee - I hereby claim the information contained on this permit is a true statement as witnessed by my signature above and I further state that I am a resident of Alaska.

TO BE COMPLETED BY ISSUING OFFICER: The above named person(s) is authorized to take fish according to the stipulations below and those in the attached letter:

Valid fishing location is _____

Valid fishing dates begin _____ and the permit expires on _____

Valid fishing gear is _____

Under authority of this permit _____ whitefish and _____ suckers may be taken.

_____ PU- _____
Signature of Issuing Officer Date Issued Permit Number

CATCH FORM FOR YUKON AREA
PERSONAL USE WHITEFISH AND SUCKER FISHERY

THIS RECORD MUST BE SUBMITTED TO THE DEPARTMENT OF FISH AND GAME WITHIN 10 DAYS AFTER THE EXPIRATION DATE OF THE PERSONAL USE FISHING PERMIT WHETHER YOU FISHED OR NOT. FAILURE TO RETURN THIS FORM WILL BE CAUSE TO REFUSE YOU A PERSONAL USE PERMIT NEXT YEAR.

DATE MM/DD/YY	WHITEFISH	SUCKERS	KILLED NONTARGET SPECIES		FISH RELEASED ALIVE		OTHER
			Species	Number	Species	Number	

RETURN TO: Alaska Department of Fish and Game
Commercial Fisheries Management and Development Division
1300 College Road
Fairbanks, AK 99701
Phone: (907) 456-4286

Sign and Date this Catch Report when you return it.

Appendix C.15. Example of the first Upper Yukon Area subsistence fishing permit reminder letter, 1993.

STATE OF ALASKA

WALTER J. HICKEL, GOVERNOR

DEPARTMENT OF FISH AND GAME

November 23, 1993

[redacted]

Dear [redacted]:

The department issued fishing permit PC-[redacted]-93 to you for the 1993 season. To date, the department has not received your expired permit and catch information for the 1993 season. Regulations require you to keep an accurate record of your catch and to return the expired permit with the catch record at the end of the season. Even if you did not fish, or caught no fish, you must return your permit. FAILURE TO RETURN YOUR PERMIT AND CATCH INFORMATION WILL RESULT IN YOUR NOT BEING ISSUED A PERMIT NEXT YEAR.

Please return your expired permit and catch information immediately. If you are unable to locate the expired permit, please fill out the following questions and return this letter to: Department of Fish and Game, Commercial Fisheries Management and Development Division, 1300 College Road, Fairbanks, Alaska, 99701-1599.

I fished in 1993. Yes No (Circle one)

If you fished in 1993, please fill in the number you caught below.

Chinook/Kings _____ Fall Chums _____ Whitefish _____

Summer Chums _____ Coho _____ Other _____

_____ _____

Signature Date

The poor chum returns during 1993 made it a difficult year for both fishermen and managers. We need your catch information to help us make an accurate assessment of the run and the harvest. Thank you in advance for your cooperation.

Sincerely,

Russ Holder
Fishery Biologist
Commercial Fisheries Management
and Development Division
(907) 456-4286

Appendix C.16. Example of the first Upper Yukon Area subsistence fishing permit reminder letter sent to households which had complied with the inseason reporting requirement but had not reported postseason, 1993.

STATE OF ALASKA

WALTER J. HICKEL, GOVERNOR

DEPARTMENT OF FISH AND GAME

November 23, 1993

[redacted]

Dear [redacted]:

The department issued subsistence fishing permit PC-[redacted]-93 to you for the 1993 season. We appreciate and use your inseason telephone reporting. My summary of your telephone reports indicate that you harvested the number of fish indicated below:

Chinook	0	Fall Chum	0
Summer Chum	0	Coho	0

Although you may feel that you have completed your reporting requirement, we have not received your expired permit. A condition of the permit you were issued requires that you keep an accurate record of your catch and return your expired permit with the catch information at the end of the season. I need your expired permit to confirm the total number of fish you harvested this past season.

Please return your expired permit and catch information immediately. If you are unable to locate the expired permit, please fill in the number of fish you caught last season and return this letter to: Department of Fish and Game, Commercial Fisheries Management and Development Division, 1300 College Road, Fairbanks, Alaska, 99701-1599.

Chinook/Kings _____ Fall Chums _____ Whitefish_____

Summer Chums _____ Coho _____ Other_____

_____ _____

Signature Date

The poor chum salmon returns during 1993 made it a difficult year for both fishermen and managers. We need your catch information to help us make an accurate assessment of the run and the harvest. Thank you in advance for your cooperation.

Sincerely,

Russ Holder
Fishery Biologist
Commercial Fisheries Management
and Development Division
(907) 456-4286

Appendix C.17. Example of the second Upper Yukon Area subsistence fishing permit reminder letter, 1993.

STATE OF ALASKA

WALTER J. HICKEL, GOVERNOR

DEPARTMENT OF FISH AND GAME

December 16, 1993

[redacted]

Dear [redacted]:

The department issued fishing permit PC-[redacted]-93 to you for the 1993 season. To date, the department has not received your expired permit and catch information for the 1993 season. Regulations require you to keep an accurate record of your catch and to return the expired permit with the catch record at the end of the season. Even if you did not fish, or caught no fish, you must return your permit. FAILURE TO RETURN YOUR PERMIT AND CATCH INFORMATION WILL RESULT IN YOUR NOT BEING ISSUED A PERMIT NEXT YEAR.

Please return your expired permit and catch information immediately. If you are unable to locate the expired permit, please fill out the following questions and return this letter to: Department of Fish and Game, Commercial Fisheries Management and Development Division, 1300 College Road, Fairbanks, Alaska, 99701. I have enclosed a self-addressed stamped envelope for your use.

I fished in 1993. Yes No (Circle one)

If you fished in 1993, please fill in the number you caught below.

Chinook/Kings _____ Fall Chums _____ Whitefish _____

Summer Chums _____ Coho _____ Other _____

_____ _____

Signature Date

The poor chum salmon returns during 1993 made it a difficult year for both fishermen and managers. We need your catch information to help us make an accurate assessment of the run and the harvest. This is your second and FINAL notice that we have not received any information from you. To get a permit next year, you must report your catch for last season.

Sincerely,

Russ Holder
Fishery Biologist
Commercial Fisheries Management
and Development Division
(907) 456-4286

Appendix C.18. Example of the second Upper Yukon Area subsistence fishing permit reminder letter sent to households which had complied with the inseason reporting requirement but had not reported postseason, 1993.

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

WALTER J. HICKEL, GOVERNOR

December 16, 1993

[redacted]

Dear [redacted]:

The department issued subsistence fishing permit PC-[redacted]-93 to you for the 1993 season. We appreciate and use your inseason telephone reporting. My summary of your telephone reports indicate that you harvested the number of fish indicated below:

Chinook	3	Fall Chum	0	Summer Chum	2	Coho	0

Although you may feel that you have completed your reporting requirement, we have not received your expired permit. A condition of the permit you were issued requires that you keep an accurate record of your catch, and to return your expired permit with the catch information at the end of the season. I need your expired permit to confirm the total number of fish you harvested this past summer. I have enclosed a self-addressed stamped envelope for your use.

Please return your expired permit and catch information immediately. If you are unable to locate the expired permit, please fill in the number of fish you caught last season and return this letter to: Department of Fish and Game, Commercial Fisheries Management and Development Division, 1300 College Road, Fairbanks, Alaska, 99701-1599.

Chinook/Kings _____ Fall Chums _____ Whitefish _____

Summer Chums _____ Coho _____ Coho _____

_____ _____

Signature Date

The poor chum salmon returns during 1993 made it a difficult year for both fishermen and managers. We need your catch information to help us make an accurate assessment of the run and the harvest. This is your second and **FINAL** notice that we have not received your expired permit or confirmation of your season's harvest. To get a permit next year, you must report your catch for last season.

Sincerely,

Russ Holder
Fishery Biologist
Commercial Fisheries Management
and Development Division
(907) 456-4286

Appendix C.19. Example of subsistence pike fishing permit reminder letter, 1993.

STATE OF ALASKA

WALTER J. HICKEL, GOVERNOR

DEPARTMENT OF FISH AND GAME

1300 COLLEGE ROAD
FAIRBANKS, ALASKA 99701-1599

January 31, 1994

[redacted]

Dear Lindred:

The department issued PIKE fishing permit ST-[redacted]-93 to you for the 1993 season. To date, the department has not received your expired permit and catch information for the 1993 season. Regulations require you to keep an accurate record of your catch and to return the expired permit with the catch record at the end of the season. Even if you did not fish, or caught no fish, you must return your permit. FAILURE TO RETURN YOUR PERMIT AND CATCH INFORMATION WILL RESULT IN YOUR NOT BEING ISSUED A PERMIT NEXT YEAR.

Please return your expired permit and catch information immediately. If you are unable to locate the expired permit, please fill out the following questions and return. I have enclosed a self-addressed stamped envelope for your use.

I fished in 1993. Yes No (Circle one)

If you fished in 1993, please fill in the number you caught below.

Pike _____ Whitefish _____ Burbot _____

Suckers _____ Sheefish _____ Grayling _____

_____ _____
Signature Date

Your catch information is needed to accurately document last season's harvest. Thank you in advance for your cooperation.

Sincerely,

Bonnie Borba

Bonnie Borba
Fishery Biologist
CFMD Division
(907) 456-4286

Appendix C.20. Example of the letter sent to Delta River fish carcass applicants, informing them that no Delta River fish carcass permits were being issued in 1993.

STATE OF ALASKA

WALTER J. HICKEL, GOVERNOR

DEPARTMENT OF FISH AND GAME

1300 COLLEGE ROAD
FAIRBANKS, ALASKA 99701-1599

November 15, 1993

Attention Delta River Fish Carcass Applicant:

This letter is to inform you that the department is not going to issue any permits for households to retrieve salmon carcasses from the Delta River in 1993. Usually, households are allowed to retrieve chum salmon carcasses from the Delta River flood plain after November 20. As you are probably aware, the 1993 return of fall chum salmon to western Alaskan Rivers was half that expected.

At a recent staff meeting in Anchorage, the department decided not to issue any permits to collect salmon carcasses this year. The department had initially considered issuing carcass permits if the Delta River met its escapement objective of a minimum of 11,000 chum salmon. Our recent ground survey count estimated approximately 17,000 fall chum salmon in the Delta River. Even though the escapement objective for this system was achieved, this appears to be the only escapement objective for fall chum salmon that was met in the entire Yukon River drainage. The reason for not issuing any permits this year is to protect those eggs already in the spawning gravel. It was felt that the department would be inconsistent to allow households to gather carcasses from the spawning ground--and likely cause some mortality to the eggs in the redds--when every one of those eggs is important to rebuilding the Yukon River fall chum salmon.

If you have any questions regarding this closure, please telephone me collect at 456-4286. We appreciate your cooperation.

Sincerely,

Russ Holder

Russ Holder
Fishery Biologist
Commercial Fisheries Management
and Development Division
(907) 456-4286

OFFICE OF EQUAL OPPORTUNITY EMPLOYMENT

The Alaska Department of Fish and Game conducts all programs and activities free from discrimination on the basis of sex, color, race, religion, national origin, age, marital status, pregnancy, parenthood or disability. For information on alternative formats available for this and other department publications, please contact the department ADA Coordinator at (voice) 907-465-4120, (TDD) 1-800-478-3648, or (FAX) 907-586-6596. Any person who believes s/he has been discriminated against should write to: ADF&G, P.O. Box 25526, Juneau, AK 99802-5526; or O.E.O., U.S. Department of the Interior, Washington, D.C. 20240